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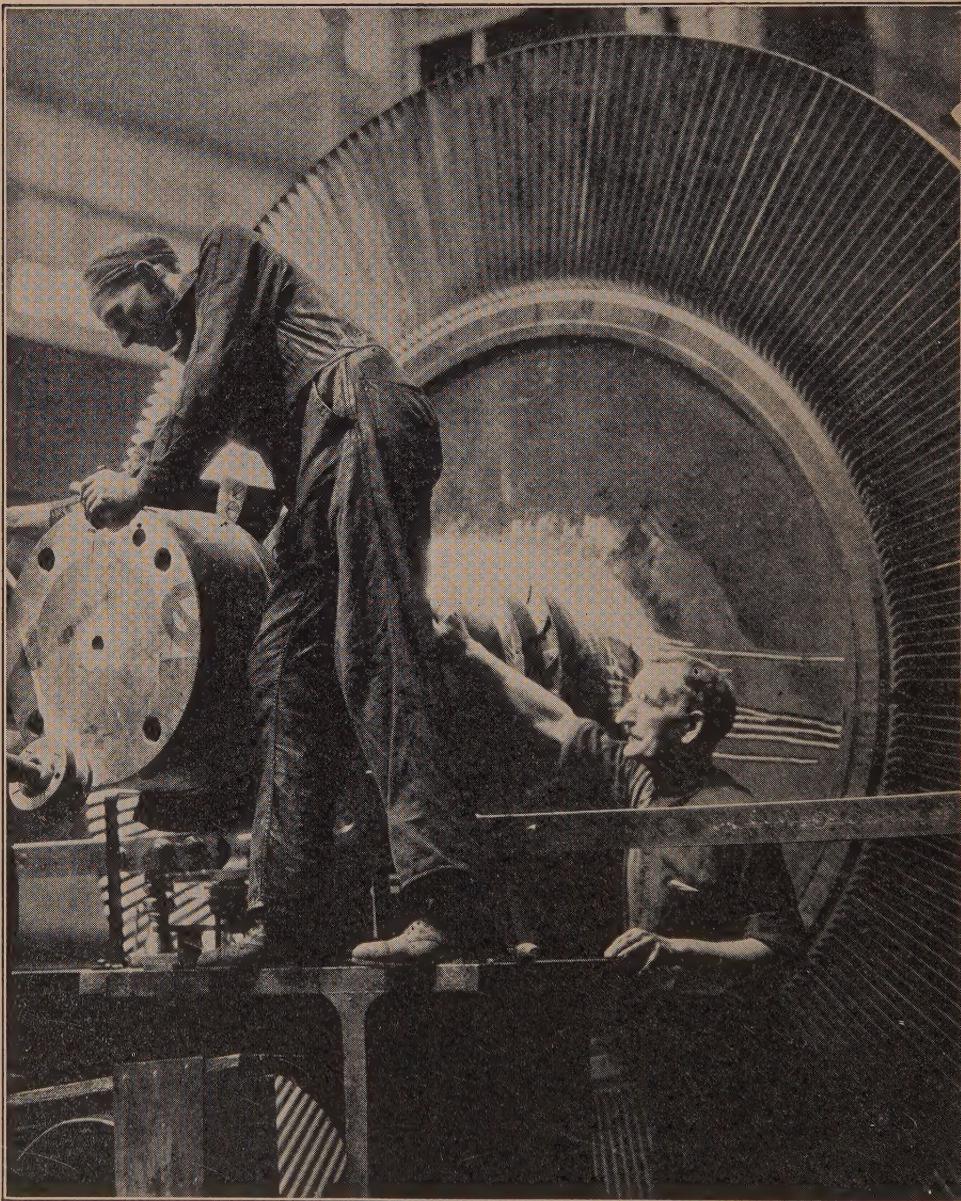

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AMERICAN ECONOMIC LIFE

AND THE MEANS OF ITS IMPROVEMENT

by

REXFORD GUY TUGWELL
THOMAS MUNRO
ROY E. STRYKER

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Third Edition

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To those friends and students of ours who thought we ought to write it, this book, with all its known inadequacies, is given, in the hope that they may somehow find it useful in the places they imagined for it.

PREFACE TO THE THIRD EDITION

This edition has followed the general scheme of the first and second editions of this book which were published for general college use in 1925. The idea of organizing a text about the phases of economic life which were, to the ordinary person, its most notable ones, was a rather unusual one at that time, as, also, was the idea of a book which frankly attempted to look forward toward betterment. These ideas were, however, only new for our time. Adam Smith was interested in human welfare first of all—as the title of his great *Wealth of Nations* suggests; Thomas Malthus wrote his great work on the *Principle of Population* with the subtitle "as it affects the future improvement of society"; indeed, to all the earlier writers their subject matter was only interesting because its understanding and mastery conditioned human progress. It is only lately that economists have sometimes imposed upon their work the prohibition of considering, along with what is, what ought to be. We have preferred to return to the older tradition of our science. To us what is, is of importance only because we can make of it a better future. We do not slight the description of present facts, events, schemes of organization. On the contrary, we depend almost entirely on analysis of the going system; but we frankly try to suggest present defects and future possibilities of improvement.

So much for the attitude toward our science which determined the first construction of *American Economic Life* and led us to maintain the same structure for this present volume. There is another difference we must acknowledge. Economics has by now become, in the usual college and high school text, a rather rigid system of doctrine, built upon the suggested solutions for problems which were met by former generations of economists. This system we have pretty largely departed from for two reasons. First, when problems change, solutions also change, and a doctrinal structure built up from old solutions *must* be irrelevant for our problems and those of the future. And second, we believe that, for good teaching, answers ought to be kept in the back of the book. When a student is told to begin with the proposition which is to be illumined and proved by a difficult exposition, he naturally loses interest in the solution. Life isn't like that. It offers plenty of problems; but their answers never come first. And it is for a life of this kind that the schools have to prepare.

Although we have, for these reasons, and also because it seemed to work, followed the scheme of the first edition, this one is considerably altered. The changes have consisted in deleting some of our old material and adding several chapters on entirely new subject matter. We have tried to find a workable compromise between the new way of making a text, in which we believed, and the requirements of the ordinary curriculum which, if we failed to meet them, would at least greatly restrict the usefulness of such a book as this. There will be found in it, we believe, most of the descriptive subject matter to be found in the usual text. We hope, however, that our innovations in treatment will have improved it for the uses of pedagogy. In addition to the general acknowledgments which were made in the preface to the second edition we are moved to express our gratitude here to Professor Colston E. Warne of the University of Pittsburgh who has twice read the manuscript of this edition and assisted immensely in its preparation by discriminating suggestions and useful criticisms. At many critical points he has assisted in strengthening the text as it now stands.

R. G. T.
T. M.
R. E. S.

Columbia University
January, 1930

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BOOK I

PRESENT LEVELS OF LIVING AND HOW THEY CAME TO BE

PART I

THE PRESENT ECONOMIC SYSTEM AND ITS ORIGINS

CHAPTER 1

ECONOMIC ORDERS: ANCIENT, MEDIEVAL, AND MODERN

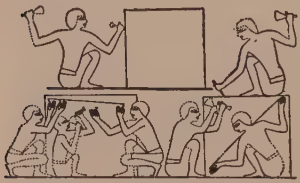
1. *Slavery*

Perhaps the most important lesson to be drawn from a survey of economic history is the simple fact that economic change goes on. Persons who have no historical knowledge often assume that the conditions which surround them are eternal and immutable. Whatever is seems not only right but natural and necessary—including inefficiency, injustice, and unhappiness as well as their opposites. We are coming to see, however, that no economic institution is perfect or sacred, and that all of them can and should be examined constantly with a view to their improvement. For this reason it seems well to inquire what portions of our system have come about most recently, what ones seem now to be changing, and whether these changes amount, on the whole, to betterment. It is well to inquire, concerning methods of conducting industry, whether or not other ways have been tried, and if so what their strong and weak points have been. With these ideas in mind, we shall survey briefly the economic life of the past few centuries with an eye especially to productive mechanisms and to the quality of life on various levels which accompanied the use of these mechanisms.

Egyptian slaves making sun-dried bricks (from a wall painting made about 1500 B.C.). Nile mud, mixed with chaff or straw, is being worked with a hoe, carried away in buckets and dumped in a pile. Lying on the ground in a row are three bricks, from the last of which a wooden mold, used in shaping them, is being lifted. An overseer with a stick is seated close by. The finished bricks are carried off by means of a yoke across the shoulders. (Courtesy Metropolitan Museum of Art.)

For all practical purposes, the history of our economic system may be dated from the Middle Ages; that is to say, about the 11th century. It is true that there were very elaborate and highly technical industrial systems before then, but the dark ages of chaos and barbarism after the fall of the Roman Empire almost completely demolished the ancient economic world, and made it necessary for people to begin again very near the start. For purposes of contrast with our own times, it is interesting to remember that the economic life of ancient Greece, Rome, Egypt, and the other great civilizations of the past was founded upon the institution of slavery. Land was owned by a few great proprietors and labor was extremely cheap as a result of the steady influx of slaves from foreign conquests. The existence of a slave class was considered, in ancient times, as not only necessary but just, since, as the phrase went, "to the victor belong the spoils." Furthermore, as some of the greatest ancient thinkers maintained, there is a natural slave class of mentally inferior persons, who are incapable of doing anything but the most menial work. Of course, these thinkers were never able to demonstrate conclusively that the class of mentally inferior people always corresponded with those who had had the bad luck to be born of slave parents or captured in war. But still the institution of slavery endured throughout many centuries because no other system seemed possible.

In judging the results of slavery in terms of human life, the outstanding fact is an extreme inequality between the upper and lower classes—the former enjoying all the leisure and luxuries, and the latter privileged only to labor in misery and to consume such goods as would sustain life. Under the Pharaohs of Egypt, and under the more ruthless kings and emperors of Rome, human life was cheaper than we can possibly imagine. Slaves were sacrificed in thousands for the accomplishment of imperial projects; and not less ruthlessly in the smaller projects of individual owners. Under the management of a humane master, the lot of a slave was not intolerable from the standpoint of animal comfort; owners sometimes learned that, for selfish reasons, it was advisable to keep one's servants fairly healthy and contented. But the institution of slavery acted as a barrier to education and individual initiative among the lower classes. Since slaves were ready to hand, moreover, there was no incentive to the invention of labor-saving machinery, and the same primitive hand tools for tilling the soil, making weapons, pottery, rough textiles, and the like, were handed down through the generations without thought of change. In fact, it was regarded as beneath the dignity of an aristocrat to turn a hand at any physical labor; his activity should lie either in war and sport, or in the more abstract realms of philosophic and literary thought. Thus, the institution of slavery was self-perpetuating, since it discouraged efforts to discover the more efficient mechanical methods which have now rendered slavery unnecessary.



Stonecutters dressing blocks. Four men with mallets and chisels are dressing down blocks to true surfaces. In lower left corner one of them is assisted by two more who test the accuracy of his work. After two edges of the block are determined, a cord is stretched between two pegs, and other pegs, of equal length, held as a gauge at any point on the surface, show how much remains to be chiseled away. (From an Egyptian tomb of about 1500 B.C. Courtesy Metropolitan Museum of Art.)

At a certain stage in human progress, slavery was not an unqualified evil. In the first place, it was an advance over the earlier practice of ruthlessly slaughtering captives taken in war. When it was first realized that one's enemies could be kept alive and made to work like farm animals, the logical consequence was a treatment of them as merciful as was accorded other live stock. The aristocrats would not engage in physical work, but some of them, at least, would turn their attention from warfare or idleness to problems of management, and to the insuring of a surplus of wealth through continued cultivation, husbandry, and simple manufactures. Without slavery to place a surplus in the hands of a leisure class, there could have been few of the magnificent contributions the ancient civilizations made to the arts and sciences. On the credit side of the sheet, we must place the fact that the pyramids of Egypt, the temples and statues of Greece and Rome, were constructed, the poems and dramas written, and the foundations of all our science laid. On the debit side, we must recognize that the production of these things implied abject suffering for millions throughout many centuries. Admitting that slavery is morally unjustifiable and no longer even economically efficient, the fact remains that it was the basis of ancient civilization.

2. *The Classic World and the Dark Ages*

In these ancient empires, one further fact looms up as significant by contrast with the Dark and Middle Ages which followed. Military domination, enforced first by Babylonian and Assyrian generals, then by the Greek and Roman conquerors through wider and wider areas, caused the breaking down of local barriers, and the opening up of new territories to interregional trade. Alexander's conquests in the Persian dominions introduced the Oriental and Mediterranean peoples to each other and gave them a taste for interchanging products. Cæsar's conquests in Britain were the necessary preliminary to the shipment of tin from the mines of Cornwall back to Rome. While the *Pax Romana* endured throughout Gaul and the Mediterranean world, the roads of commerce lay open. Merchants could travel back and forth, exchanging fine handicrafts from Greek and Roman cities for the minerals, marble, hides, lumber and

Household slaves brewing beer and making bread. (From ancient models illustrating daily life in Egypt; now in the Metropolitan Museum of Art, New York City.)

foodstuffs of the outer world. Wherever the Roman armies reached, the law-abiding farmer and craftsman were fairly safe at their work. And since the ancient world was one of far-reaching commercial interchange, it necessarily brought with it a considerable development of financial mechanisms. The gathering of taxes from subject peoples, the regulation of tariffs, the payment of expenses for road construction and government, necessitated, under the Roman Empire, the development of an elaborate financial system.

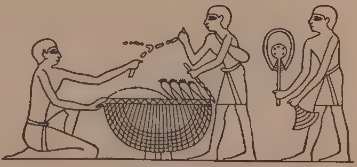
The ancient economic world was similar to ours in having moved a considerable distance towards interrelation of parts with attendant specialization on particular products; and there was a distinct development of that cultural breadth which commercial interchange always gives. It was like ours in the existence of some fairly large cities with a population engaged in commercial and manufacturing pursuits apart from agriculture, and with social privileges based on capital, which placed them somewhere intermediate between the landholding nobles and the agricultural laborers. It was like ours in having developed a monetary and financial system which formed the basis of exchange and price; in other words, it had—at least in the more thickly settled regions—advanced far beyond the primitive method of bartering products. It was unlike ours in resting upon an institution which recognized an almost impassible economic and social barrier between the working class and the owning class. At least, in the ages when military ruthlessness had full sway, the military empires widened the distance between these extremes to an extent far greater than anything we willingly tolerate at present. Adding to this the fact, just noted, that labor-saving machinery was not invented or desired, we have the picture of an economic system which was workable but static; there was in it no continuous and purposeful acceleration of economic progress toward more and more production per human unit, or toward a condition where leisure and enjoyment would be the property of more and more of the total population.

What we know as the Dark Ages, coming between the 7th and 10th centuries in Europe, accomplished the thorough demolition of this economy. During these years, little settled ownership of property existed anywhere and still less regular interchange between regions. The whole countryside was swept continually, first by hordes of barbarians, and later by the descendants of these same barbarians, roughly hammered together into small armies by their chiefs, who were little better than robber bandits. Here and there near the walls of some well-situated town or monastery, a little group might glean a precarious living from one year to another by gardening and cattle-raising. But it existed always in the expectation of some ruthless raid which would burn its flimsy huts, destroy its crops, and carry off its cattle in a night. Even slavery diminished, since there was not sufficient security to make it worth while to own slaves and cultivate the land. So the common practice of each leader in war was to butcher as many as possible of the miserable peasants who clustered about his rival, thus effectively preventing him from again becoming prosperous or powerful.

3. *Agriculture and Industry under Feudalism*

During these chaotic centuries following the collapse of the Roman Empire, there gradually arose a new social and economic structure, known as the feudal system. By the end of the 13th century, it had assumed the proportions of a world-wide political and ecclesiastical order. To the theorists of the later Middle Ages, the ideal political system was a graduated hierarchy, which should have two distinct orders: one, the secular organization, which was to be headed by the Holy Roman Emperor, successor to Charlemagne; the other, the ecclesiastical hierarchy which was to be headed by the Pope. These two supreme authorities were supposed to divide all powers between them—the Emperor having command over all earthly matters, and the Pope over all spiritual ones. From the Emperor downward was supposed to extend a gradual scale of nobles including the kings of the various nations, dukes, barons, and lesser nobility, the townspeople, and finally the serfs at the bottom. From the Pope, another hierarchy was supposed to extend downward through the various levels of clergy. Thus, the whole world was ideally an orderly system of ranks in a graded aristocracy. As a matter of fact, this very perfect and orderly arrangement never triumphed over all unruly elements, but it was approximated during the time between the 10th and the 15th centuries.

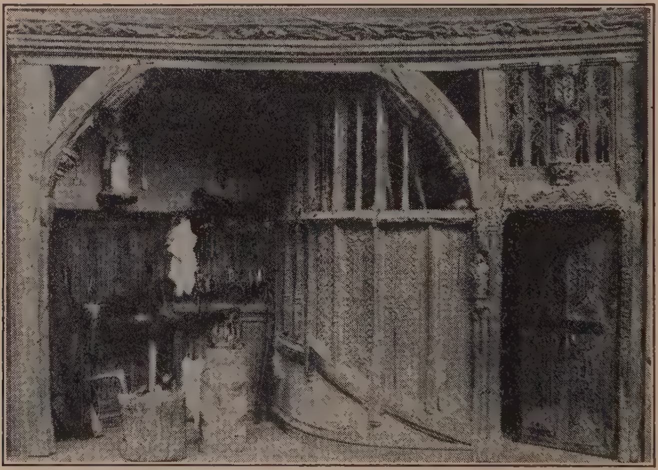
Bartering—that is, the exchange of different commodities, was the only form of trade in ancient Egypt. Here a dealer tries to persuade a woman to take a string of beads while they haggle over the price. At the right are two men bargaining over some fishhooks. (Courtesy Metropolitan Museum of Art.)



Two men trading with a vegetable dealer who kneels in front of his basket of vegetables. One man offers in exchange a string of beads, the other a fan. (Courtesy Metropolitan Museum of Art.)

The beginning of this feudal organization was a process of gradual coagulation of small groups, each around a particular baron who was strong enough to protect it. During the Dark and Middle Ages, no king or emperor—with a few exceptions such as Charlemagne—was strong enough to exercise anything like a world-wide, or even nation-wide, authority. The actual government of the world was in the hands of a multitude of petty nobles who owed more or less vague obligations of loyalty to some king, but who, in many cases, were strong enough to defy that authority indefinitely. No central authority and no democratic agreement among the peoples of various regions existed during the early Middle Ages; consequently there was nothing like a world-wide economic or commercial system. Life in all its phases—social, industrial, and intellectual—was organized into small units, like islands in an ocean. To understand the transitional stage between chaos and the extensive economic network of today, one should try to visualize a world composed of these small, highly self-sufficient units, each of which was a miniature world in itself, having only occasional contact with an outside world.

The medieval, like the ancient world, rested upon a fundamental division between the working, propertyless class, and the military proprietors. In both cases, the division was hereditary, difficult for an individual to cross, and theoretically approved of as a permanent system. But there are several important distinctions between the slave of the ancient world, and the serf of the Middle Ages. The former could be bought and sold at will; he had practically no personal rights except what his owner chose to allow him. He had no family life except at the sufferance of his master, and any duty could be exacted of him. The serf of the Middle Ages could not be bought and sold by his master away from the land on which he was born. He was attached rather to the land than to any master. He had certain fairly well-defined rights to permanence of family life and occupation, which were his by custom and tradition, although in practice the nobles might often violate



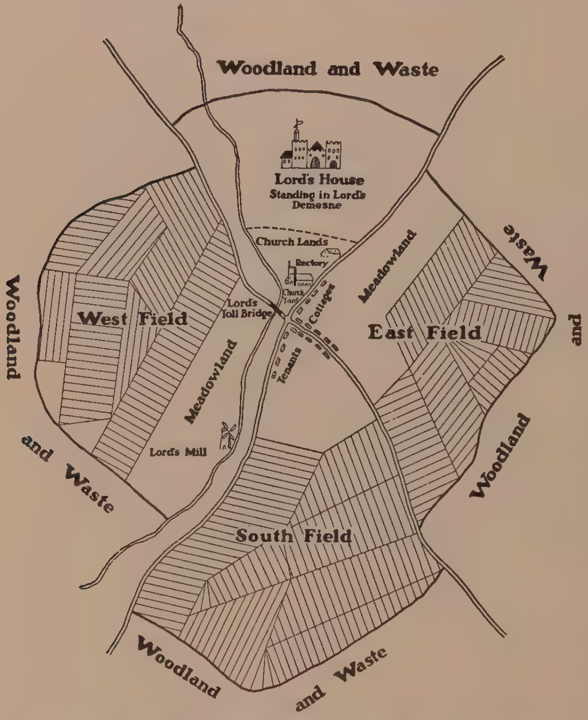
A medieval armorer's workshop (from an exhibit in the Metropolitan Museum of Art, New York). Few ordinary workmen could enjoy a room so ornately decorated. But the elaborate Gothic wood carving, alive with delicate and subtly irregular tracery, expresses perfectly the spirit of hand craftsmanship as contrasted with modern machine-made decoration.

these rights without protest from outside. To the lord, the serf owed certain duties in exchange for the military protection and leadership which the lord owed to him; the serf was bound by custom to devote a regular proportion of his time to working for the lord, and must pay certain dues out of his own products. He must use the bakery, the wine press, the weights and measures, and other apparatus of the feudal lord, and pay for using them, instead of finding substitutes for them in his own home. So far as happiness goes, the serf was no doubt often less to be envied than the slave and had little more practical freedom, but his condition could at least be called a transitional stage toward the recognition of his rights as a citizen in a democracy.

Medieval life tended to crystallize, as has been said, into self-sufficient units; the name usually given to one of these is the *manor*. It contained practically all the essential activities and products of subsistence, and is therefore interesting to analyze as an epitome of what is necessary in any economic system. In the first place, it rested on an agricultural basis; what industry there was was rudimentary. Within the small area of land which constituted the manorial estate, all sorts of necessary foods were raised. Within the small village which clustered about the strong castle of the lord, went on all the necessary industrial activities of a simple scale of living: spinning, weaving, the tanning of leather, the shaping of clothes and shoes, the churning of butter, the making of cheese, the brewing of ale and fermenting of wine, the baking of bread, primitive blacksmithing, and carpentry. Products and services were exchanged between residents of the manor, and the primitive commerce of the time went on by direct barter with little or no use of money.

Glancing first at the agricultural basis of the manorial system, let us try to visualize the English countryside as it existed in the 13th century. A venturesome traveler through the countryside at that time would, of course, have seen nothing really corresponding to our cities. Nearly every family did more or less in the way of farming and most of them actually lived on and by the soil. Up until the 18th century, in fact, England, like all the other countries of the world, was predominantly rural. Towns were small: a few low houses clustered in narrow streets about a castle, a cathedral, a seaport, or a river bank favorable for trading. If it had been possible for a traveler at that time to take an airplane view of the country, he would have seen vast areas given over to forests and waste land, with here and there a cleared and settled area. Near the center of each of these clearings he would have seen a little group of buildings and around them fields cultivated in a curious fashion. Instead of being given over to immense stretches of a single crop, as in the wheatfields of our middle west, he would have seen a patchwork of small plots, each curiously striped with parallel ridges of sod, or rows of stones and sticks. If he watched long enough to follow the movement of any one laborer during the working-day, he would have seen him plow or cultivate along one of the strips of soil between two parallel ridges. After a few hours of work, this man, instead of going into the next strip, would have gathered up his belongings and gone to a strip somewhere within a distant field, and each of the other laborers would have acted similarly. In most of the manors, the observer would have noticed one such field which received no attention at all. It was similarly stripped, but allowed to grow up to vegetation unchecked. Still another area near the manor house was usually devoted to the pasturing of animals.

The Medieval Manor



A typical map of the snug little world, laborious and isolated, in which the medieval countryman passed his days. To break down its cell walls and merge this unit with others was a necessary step in the growth of modern civilization.

What was the reason for this curious arrangement of farm land and farm work? It was a crude but, for its time, effective arrangement for securing a fairly equal division of land among the serfs and a continued fertility of the soil. The field which was untended was lying fallow, supposedly renewing its fertility after two years of cultivation; otherwise it would have been quickly exhausted, for nothing was understood of the principle of rotating crops or of scientific fertilization such as might keep land in constant use without depleting its richness. Each year a different one of the three main fields which constituted the typical manorial estate was thus left fallow.

Why was the ground divided into strips and so strangely allotted to individual farmers? Because on the usual farm there are natural inequalities in fertility; some parts are moist and rich, others sandy, rocky, or swampy. If one farmer had possessed only an inferior strip, he could not have produced enough to keep himself alive, and it seemed, therefore, a fairly equitable arrangement to allow him several small strips in various parts of the estate. Such an arrangement, of course, had its serious drawbacks from the standpoint of efficiency. It was, for instance, distinctly unfavorable to individual initiative. For if one strip was allowed to grow up to weeds or was improperly drained, its neighbors would suffer, and no strip would be treated in a way much different from the others. Besides, the time lost by every laborer in traveling between distant parts of the estate during the day amounted to a considerable waste of time and energy. In some cases, each serf on the manor had a hereditary right to certain definite strips of land; in other cases, the strips were periodically redivided and reapportioned. In all cases, the serf had to work not only on his own allotment of ground, but for a certain definite share of his time on the strips of ground which were reserved for the support of the lord and his household.

4. *Town Work in Medieval Times*

In the larger and more prosperous of the manorial villages, there grew up, during the Middle Ages, a type of industrial organization known as the craft guild. In any large town there were many individuals performing the same craft, and these groups of fellow-craftsmen developed a traditional system of regulations which governed all industry for several centuries. To understand the industrial process of those days, it is necessary to forget all ideas of standardized and subdivided factory methods and imagine a given product being made from start to finish within a single household. The skilled and successful master craftsman of the Middle Ages was the head of a large establishment, including not only his own family, but also a group of apprentices to whom he was teaching his craft, and also a group of older and more experienced workers called "journeymen." The apprentices had been "bound out" by their parents to the master craftsman for a term of years, and during that time they lived with him, received food and lodging, and submitted to his orders, being subject to recapture and punishment if they ran away. At the end of their period of instruction, they became independent journeymen, after passing examinations given to test their skill. As journeymen, they were at liberty to go from place to place and sell their services for hire.

Swords and daggers were a part of every medieval gentleman's dress. The swordmaker's art was a very exacting one, working as he did with comparatively crude tools and alloys. (From Lacroix: *Manners and Customs*.)

Within any large community the master craftsmen found it advisable to get together and come to some agreement in regard to prices, hours, and manufacturing methods. Ruthless competition among individuals in the same town and craft was regarded in the Middle Ages as evil and unthinkable; for the peace and prosperity of all, they must stick to some regular method of dividing up the business and charging similar prices for similar products. In time the craft guilds came to exercise an autocratic power over the practice of any occupation within a town. No stranger would be allowed to come in and to practice it without being first admitted to membership, and the guilds become more and more exclusive. No member could decide to introduce new methods of manufacture or could act upon shrewd foresight and buy up the available supply of some necessary material for himself. By the officials of the craft in council, following closely the rule of old custom, the weight of every loaf of bread was prescribed, the breadth and thickness of every bolt of cloth, the exact specifications for the materials which went into them, the tools to be used in their manufacture, and the prices for which they could be sold.

The results of this system were both good and bad. At first, it performed valuable functions in securing coöperation, regular work, and some degree of individual security. Hard times might hit a whole town or nation, but the individuals in it sank or swam together. As industry became more prosperous and conditions at large more safe and stable, the craft guild outlived its usefulness and became an obsolete institution. Its exclusiveness tended to keep out, or hampered, industrious workers from outside, and, as in the case of the strips of farm-land, the craft regulations tended to restrict individual initiative. For generations, by this means, new inventions and efficient methods were discouraged because of the difficulty of getting a conservative body to take a decided step in advance.

There is a temptation to look back with too romantic an eye on the life of the medieval craftsman, and to forget the many respects in which his work was difficult and uneducative. It is true, of course, that the fact of his making a whole product instead of specializing, allowed for some feeling of artistry in doing the whole task well. But his work, though not subdivided, was often highly standardized: he had to perform it in the prescribed way and could seldom follow an individual impulse. The hours of workmen were many and arduous: from dawn to dark in the case of the apprentices, and scarcely less for the higher workmen if they wished to make a comfortable living. Labor-saving devices were of course very few, and hundreds of steps, such as shaping boards or hammering out metals, had to be performed by back-breaking and monotonous drudgery. In appraising the workingman's life at that epoch for its intrinsic qualities, we must not forget the unsanitary and unhygienic conditions under which he and his family lived in any town or city. Factory smoke and dust might be missing, but the value of sanitation was unknown, wells and streams were commonly polluted, streets were the common repositories of filth, and as a result, plague after plague swept over the whole of Europe. Buildings were wooden, and vast fires, which destroyed in a night the savings of a lifetime, were frequent. Food was plentiful one year and scarce the next, but at best hard to preserve and limited in variety to the products of the neighborhood. Artificial refrigeration and the preserving of foods in tins and bottles were, of course, undreamed of. At best, milk, butter, and meat could be kept fresh a short while in the damp cellars available, or the meat could be dried and salted. A direct consequence of the stale and monotonous food of the time was the desire for exotic spices, whose existence the crusaders had discovered in the Orient. Once formed, the taste for such luxuries led to commerce with the Orient, and eventually stimulated exploration for new trade routes there. But workingmen and women were, in any case, confined pretty rigorously to a diet of coarse black bread and greasy soups.

Perhaps next door to the swordmaker, the armorer worked with his journeymen and apprentices. This means of attack and defense is faintly reminiscent of the modern world which builds navies and artillery for offense and forts to resist these weapons. We do the thing on a grander, more highly socialized scale, and war with us is something more than combat among individuals, but the idea is the same. (From Lacroix: *Manners and Customs.*)

Intellectually, there was very little stimulation, beyond a limited degree, in the performance of a medieval craft; it taught one nothing of the outside world and led to no theoretical exploration. Books were almost unknown except among the clergy, and knowledge of the outside world filtered in infrequently through the marvelous but fanciful stories of traveling merchants and soldiers.

The commercial side of medieval economic life was, as we have said, extremely rudimentary at first, being restricted to barter among the residents of a town or manorial estate, with but the rarest visits of a wandering peddler or minstrel to break the complete seclusion of a group. Money was little used or needed. The precious metals were scarce, and coins were hard to protect against counterfeiting and debasement. Prices did not fluctuate through a wide range as in modern times. The raw materials of manufacture, and sometimes consumer's goods, were contracted for long in advance and exchanged at a customary rate. It was easy for the farmer to trade a basket of eggs for a new woolen cap, and for every member of the community to satisfy his simple wants likewise without resorting to money or the merchant from foreign parts. The roads were rough and, in wet seasons, heavy with mud; conveyances were crude and awkward, and the land was infested with robbers. In the early Middle Ages, a merchant was brave, indeed, who ventured to saddle and ride with a pack of silks, gold ornaments, tooled leather, or tempered swords behind him, unless he were rich enough to hire a convoy of armed men to go along.

Nevertheless, intrepid merchants did go forth upon the roads with increasing frequency from the 10th century on. An especially prevalent feature of medieval commerce was the periodic fair which attracted to it, at stated periods, a great assemblage of traveling merchants. As a rule, towns specialized in certain products from the countryside, and it was widely understood that the best occasion to buy the woolen cloth of Flanders or the wines and silks of southern France fell within a certain month and at a certain town. Whatever the specialty of a place, other merchants congregated in the region and a spirited interchange of products would go on in strange tongues. Much as the local merchants often resented the departure of money from their own town and the competition of outsiders, the fairs were pleasing to the local Lord or Bishop, who levied taxes upon the visiting merchants and filled his treasury for the coming year. Many a castle and many a cathedral were built with these funds. To encourage the merchants, the feudal lords soon found it expedient to take active steps toward expelling highwaymen and sneak thieves from the solitary roads and crowded fairs, and to offer the traveler the protection of a guard of soldiers on his road to the dominion of a neighboring baron. In the later Middle Ages, the merchants, like the craftsmen, organized themselves into guilds for the purpose of regulating competition and securing the conditions necessary for peaceful trade. They pursued robbers with vigor, made trade agreements between distant towns for the interchange of varied products, regulated taxes and local customs dues to prevent unusual extortions; and made stringent rules among themselves to prevent especially unscrupulous or enterprising members from hurting the business of others in the guild.

The spurrier's also was a trade which purveyed a necessary article for gentlemen. Spurs were handwrought on the anvil and tempered in a handy tub of water. There is reason to believe that designs were sometimes drawn for especially fine pieces, but usually the craftsman worked without paper plans; medieval industry was very different from ours in the extent to which labor was divided, and in the amount of paper work which preceded and accompanied it. (From Lacroix: *Manners and Customs.*)

5. *Transition to the Modern Economic World*

Even while the medieval institutions of the manor, and the craft and merchant guilds were at their highest development, tendencies were at work undermining them and preparing the modern economic order. These were extremely slow, gradual, and different in various places, so that it is hard to draw any sharp chronological lines between the old order and the new. As early as the 13th century, in some parts of England, the feudal system was being undermined by the commutation of traditional services into money payments. Whereas the serf in earlier times had been obliged to perform stated hours of work on the lord's demesne and to use his master's equipment for baking and brewing, there was slowly substituted for these traditional obligations a fixed money payment which relieved the serf from any further obligations towards his lord. One cause of this substitution of money payments was the increasing demand upon the barons for money by their kings for use in financing the crusades and the almost constant wars. In intervals of peace, too, as prosperity grew and the avenues of commerce were opened, there was a necessary tendency toward a more flexible relationship between owners and workers. It became harder and harder to restrict the serfs to the domain where they were born. Increasing numbers of them bought their freedom outright and went to live in the growing towns where their freer and more respectable condition attracted a growing number of others. In some regions, there was an accepted custom that any serf who had escaped and remained a year and a day without being seized was henceforth exempt from recapture. Expanded commerce also rendered obsolete the primitive system of barter and payment in commodities, and extended the uses of money.

All of these movements stimulated the growth of urban centers, especially around sea and river ports, where the population was commercial and industrial. Such a population, although theoretically bound by certain feudal obligations, tended, in practice, to become increasingly free from them. There was, throughout the Middle Ages, a conflict between the kings and the nobility which led, in time, to the victory of the kings, and the alliance with them of the town dwellers. During the early Middle Ages, after the fall of Charlemagne, the kings of Europe were weak and had constantly to battle for their thrones against rival nobles who wished to overthrow them. They needed money to maintain their positions and found a ready source of it in the rich merchants who were anxious to buy further commercial privileges and immunity from the host of irksome medieval restrictions. At first, it was difficult for anyone to borrow money, since the religious beliefs of the period held the charging of interest to be "usury" and therefore sinful. For a time, the small Jewish population scattered throughout Europe was almost the only agency which practiced the lending of money for interest, and in those uncertain times few people would consent to lend money without interest. These Jewish bankers, in spite of the persecution to which they were subjected, made themselves invaluable, by their thrift and financial foresight, to the greedy and careless nobility. Before long, others of the commercial population abandoned their religious scruples and engaged in money lending; the goldsmiths, especially, came to be something in the nature of bankers. From the merchants and master craftsmen of a prosperous town, the king would receive a handsome money gift in return for a charter which granted the town partial self-government and independence of any feudal master save the king himself. Some of these powerful towns allied in commercial leagues, such as the Hanseatic League of Northern Europe, which organized banking and credit systems, and land and water routes of transport. As a result commerce throughout Europe and with the East grew amazingly.

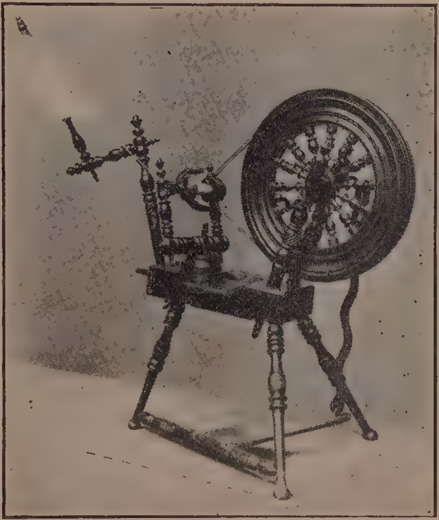
Meanwhile, on the outlying manorial estates, forces were also at work to loosen the rigid system of land division, which has been described. As feudal services were commuted into money dues, the landlord had either to hire laborers to do the work on his own patch of ground, or to rent the patch outright to some tenant and avoid further cares of management. The terrible plague of the 14th century, known as the Black Death, which in many sections of Europe carried off from a fourth to a third of the population, accelerated the break-up of the manor by making labor extremely scarce. It was increasingly difficult for the landlords to have their own plots cultivated; so more and more of them disposed of these plots in various forms of tenure, ranging from outright possession or freehold through various forms of lease to the mere "copyhold," an uncertain tenure, terminable at any time at the will of the landlord. Theoretically, all land belonged ultimately to the crown; actually a few nobles still held the lion's share of it; but the change was a move toward bridging the ancient chasm between the aristocratic landholding class and the propertyless serfs.

These shoes must have been awkward affairs by modern standards. But they were doubtless better than none at all—which was what most people had. The leather shoe was a great luxury; wooden ones (sabots) were more common, but the footwear of the masses was straw bound with rags or with the tough stalks of weeds. (From Lacroix: *Manners and Customs*.)

Another factor which led to the disintegration of the medieval system was the increasing profitableness of the production of wool, which, from the 15th century onward, was in great demand by the manufacturers of Flanders and of England. With labor scarce and the cumbersome strip method of cultivation more than ever irksome, many landlords abandoned farming altogether, ran all the strips together, and inclosed them as a "sheepwalk" or pasture. Even where agriculture was not abandoned, there was steady pressure from the tenants and small proprietors themselves, throughout the later Middle

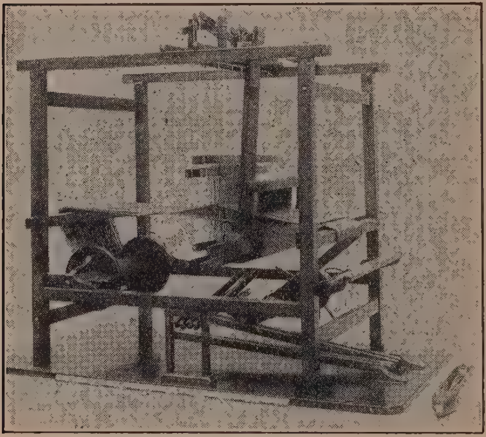
Ages, toward the consolidation of strips into large unobstructed areas where crops could be cultivated more efficiently. Gradually, also, knowledge of new crops, and of better rotation practices, created great changes in agriculture.

Rising prosperity and increasing throngs of inhabitants in the towns led also to the breakdown of the medieval system of handicrafts. In that earlier system each family had been a fairly independent unit. It had owned all the necessary, simple tools and materials of craftsmanship, had secured raw products for itself, and turned over the finished goods to the lord or some neighboring merchant in exchange for other commodities. By the 17th and 18th centuries, however, this system of isolated industrial units had almost entirely given way to what is known as the "domestic system." This was a long step toward the establishment of the modern factory system, but still retained some essential differences. It involved at first no considerable introduction of new machinery or improved methods, but was a step toward coöperation and large-scale enterprise. So many laborers and farmers had been evicted from their homes by inclosure that labor was again cheap and many of the laborers could not afford to own the simplest type of tools, invest in raw materials, or maintain a home to work in. This created the opportunity for enterprising merchants to hire them in large groups and organize them into new manufacturing units. The merchant-employer of this time, who was later to evolve into the capitalist of the 19th century, could afford to buy raw materials in large quantities, and therefore cheaply, to erect large dwelling quarters or clusters of cottages, and to install a sufficient quantity of the necessary spinning wheels, looms, tanning vats, forges, or whatever implements were needed in the process. Impoverished laborers would then apply to him for work, receive a loan of tools and a supply of material, go to their homes and work it up, then turn it back to the capitalist at a certain price for each piece. Under this system the managers of industry were



A spinning wheel of a type in use just before the industrial revolution. From a matted mass of cotton fibers the spinner produced yarn, by drawing the fibers out by hand as the revolving spindle twisted them. The twisted thread then wound around the spindle. (The Science Museum—South Kensington, England. Used by permission.)

no longer master craftsmen themselves, but financiers and organizers—this was the modern business system in embryo. The superior efficiency of the new system drove more and more of the old independent craftsmen out of work, and led to a vastly accelerated concentration of labor during the 18th century in the towns most favorably situated for manufacture. In the textile industry, these were especially in damper regions, near rivers, where the air was sufficiently moist to prevent the easy breaking of threads.



In this old-fashioned hand loom the shuttle (on floor at right) carried the thread back and forth between two longitudinal series of threads, which were alternately raised and lowered by a treadle. Only artist-craftsmen now use this slow and cumbersome process, but beautiful fabrics were woven by it. (The Science Museum—South Kensington, England. Used by permission.)

The life of an artisan under the domestic system was often one of bitter poverty; but where an industry had become established and successful, the lot of its workers was usually more fortunate than the average lot of either the medieval craftsmen or the factory workers of the early 19th century. During the early and middle 18th century, throughout England, travelers reported a scene of relative prosperity under the domestic system. There were no huge factories poisoning the air with smoke, crowding multitudes together within brick walls, and killing vegetation for miles around. It was still possible to combine the artisan's labor with gardening and a stable family life, since the artisan could have his home at a little distance from the central shop where he secured his raw material. He could bring home a supply and work on it while his wife and children were busy with the farm animals and enough gardening to supply most of the necessary food. Conditions were far from idyllic, if the kinds of shelter, food, and clothing which were then available are examined: life was hard and often short; it was full of struggle against ills which are less frequent now; but it had certain fortunate aspects. English woolen cloth was in great demand abroad, and money flowed into the pockets of the new capitalists, and pittances at least into those of their employees.

The 16th and 17th centuries accomplished a thoroughgoing victory for the kings and national governments of Europe over the lesser nobles. The whole network of medieval customs grew slacker. Naturally, a primary concern of every strong ruler was to put his power on a sound financial basis, and consequently much thought was devoted during these centuries to the problem of the means by which a nation could best become financially strong enough to resist its enemies, especially in time of war, but also in peace. This involved a close supervision of the methods both of manufacturing and of selling. In every industry, medieval guild restrictions and unwritten laws were still nominally in vogue, though increasingly ignored. But there was at least a basic regulation already in existence which could be systematized by the king's financial advisers. For example, the craft guilds had commonly issued stringent rules about the size and quality of every bolt of cloth, and it was no difficult task for the advisers of Queen Elizabeth to reaffirm and codify these with such few alterations as seemed necessary. The power of both the craft and merchant guilds so far diminished that they were left as mere social clubs, and their place in regulating industry was usurped by royal functionaries.

Meanwhile the explorations of the 15th century had opened up new trade routes to the East and to the American continents. Trade in a great variety of products was brisk and the demand for distant articles increasing. Europe was flooded with gold and silver from Central and South America, which made money transactions easier. The attention of enterprising merchants was thus extended from merely local operations to large-scale trading. Since the expenditure of capital and collective energy was necessarily great where large distances were involved, there grew up organized companies to conduct these enterprises. By special decree of the throne, one company would be granted the exclusive right to trade with a certain section of India, which involved the right to subjugate that region by force of armies, build ships, and fight pirates, raise money in the home country, and invest it in trade. It was at this time that the joint-stock company first became influential in Europe, whereby many individuals could invest their small capital in a great enterprise and receive proportionate returns as well as a share in the losses.

Monopolies were given during the 16th and 17th centuries not only on trading privileges with certain regions, but on the right to deal in certain articles. To one favorite of the king would be given the sole right to deal in pepper; to another, that in silks; and so on until the whole list of valuable commodities had been thus parceled out. There were both good and bad features in this system, depending largely on the type of man who received the monopoly. In the hands of an enterprising and shrewd trader, the industry could be thoroughly modernized and energetically advanced. In the hands of a lazy and dissolute noble, the monopoly would be merely an excuse for extorting money from the public by constant increases of price. Loud popular protests accompanied the giving out of monopolies and eventually led to their rescinding.

For the first time in the modern world, serious attention was given during these centuries to problems of economic theory. The main general problem—that of the means for advancing national wealth—was looked at in all its phases, such as the relation of precious metals to prosperity, the management of colonial trade, and the problem of regulating customs duties. These inquiries were solved in a fairly consistent way by the financial ministers of the 17th century; but by the later 18th century, progressive opinion was shifting to a radically opposed view. The former policy, known as the "mercantilist," advocated strong central control over industry, while the latter advocated freedom or *laissez faire* for individual enterprises. The governments of the 16th and 17th centuries extended their supervision to every branch of economic life in the belief that they could manage it through a bureaucracy, and it took a long time for them to learn that there were definite limitations to the workability of central regulation with the means they then had at their disposal.

Besides the general tendency toward bureaucratic control, mercantilism implied more specific answers to at least three important problems of the day. One was the question of the proper relation between precious metals and commodities in a nation's trade. Money is so obvious and adaptable a form of wealth and has for the individual so many advantages over a large stock of commodities, that economists have often had a tendency to value it more highly than it deserved. In the mercantilist period, it was regarded as a great calamity to have more precious metal leaving the country than was coming in. This theory—known as the "favorable balance of trade theory"—made it a point of contention between the greater nations of Europe for years to see which would be able to maintain a constant preponderance of the imports of precious metal over the exports of it. This implied, naturally, that imports of commodities were in general to be discouraged, since that necessitated an export of gold for payment. Exports, conversely, should be encouraged because they brought in money. There were exceptions to this general rule, especially raw materials, for, as England and the other European nations went over more and more to manufacturing, their need for raw products intensified.

This introduced the additional problem of policy toward the colonies. For it was quickly seen that the vast outlying territories of the New World might be turned into profitable sources of raw material for the factories at home. Then the question arose: should the colonies be allowed to start manufacturing on their own account, and so be brought into direct competition with home industry? Mercantilist statesmen, backing up the growing capitalist-manufacturer class, recoiled from any policy which would involve such competition between the home country and her colonies. All, it was felt, should coöperate toward the national good. But during the 18th century the colonies —especially the English colonies in America—grew increasingly restive under the attempts of the old country to prevent them from manufacturing. This, indeed, was one of the underlying causes which led to the American Revolution, and in general to the insistence of modern colonies on the right to develop their own industries.

The first theoretical voice against these policies was raised by the "physiocrats," a group of French intellectuals in the 18th century. "Let nature rule" was their fundamental doctrine. They were tired of the blunders and oppressions of national authority and trusted rather to the blind workings of nature to bring about human progress unaided. Their doctrine was mixed with much that was sentimental and impractical, but it found more scientific formulation in the mind of Adam Smith, author of *The Wealth of Nations* (1776). This book was a thorough study of actual economic data rather than of abstract doctrine, and it sought to prove by facts that if business was let alone to follow its natural development, things would turn out far better than if governments tried to guide them actively. In particular, Smith attacked the notions of a necessary balance of trade, of coercion of the colonies, and of the ancient devices to prevent competition among the business men of the country. Competition, according to Smith, was not a process of mutual injury which would lay the country bare to its enemies; there was enough business for all and competition would merely call out the best energies and inventiveness of individuals. Thus would evolve naturally the most efficient methods for industry. Each individual might seem to be working for himself alone, and might, in fact, be motivated by selfish desires, but in spite of himself, in building up his own prosperity, he could not help increasing that of the nation at large.

This doctrine lent the powerful stimulus of conscious scientific justification to the already accelerating rise of individual initiative in every department of human activity. It was one phase of the general revolutionary spirit of the 18th century. It was symptomatic of the general stability which social and political life had attained. For in more troublous times, or when humanity had been less active and intelligent in economic matters, the firm hand of some corporate or despotic control had been necessary. Now men were learning to manage social as well as natural forces more intelligently, education was spreading, and the middle classes were rapidly throwing off the political disabilities they had suffered in previous centuries. Inventiveness, progress, the right of the individual to do things in a new way which his ancestors had never had—all these ideas were in the air, and their natural expression in economics was the doctrine that the individual business man should be allowed his own way (barring only actual crime) while the government's only duty was to give him protection and perform a few simple and collective duties such as the maintenance of a postal service, the collection of taxes, and protection of the peace.

CHAPTER 2

ECONOMIC DEVELOPMENT IN MODERN TIMES

1. *The Revolution in Farming and Manufacturing*

This accelerating spirit of change and inventiveness culminated at the close of the 18th century in a rapid and tremendous upheaval within both agriculture and industry. The agricultural and industrial revolutions, as these two aspects of the change are called, had been prepared for throughout modern times by the tendencies we have been tracing. In the first place, the rigidity of medieval custom had been slowly dissolving and giving way to the more flexible arrangements of capitalism. Neither owners nor workers were restricted in their movements, their occupations, or the qualities of their living as they once had been. They were comparatively free to transfer services or wealth as they chose and to combine with others in various coöperative projects. In the second place, the surplus wealth of Europe, especially of England, had gradually increased throughout the two pre-

Plowing in this modern rice field of India is done almost exactly as it has been done for many hundreds of years. It furnishes a fair enough picture of primitive agriculture and suggests many contrasts in technique and efficiency as well as occupational hardship. (Photo Ewing Galloway, N. Y.)

ceding centuries so that capital was available to make large investments in new processes and machinery which could not be expected to give an immediate, certain return. We have noticed also how for several centuries the process of land inclosure had been going on rather sporadically, by the combining of individual strips under the ownership or tenantship of an individual farmer, and later by the turning of farm tracts into large pastures for sheep-raising. This had been steadily increasing the wealth of the large landed proprietors and ruining the smaller farmers who, in many cases, were reduced to the status of wandering laborers.

In the last half of the 18th century the rapidity of all these changes was redoubled. For the first time, farmers—always among the most conservative of men—began consciously to look about for more efficient methods of production; and the government encouraged them in this desire. Great tracts of waste land, which had been given over to swamps and heather, were drained and brought under cultivation. Above all, attention was seriously given to the problem of maintaining the fertility of the soil. Late into the 18th century the medieval three-field system was still extensively in use, under which a third of the cultivated land lay idle during every year in order to recover its fertility. Now that the small strips were giving way to larger areas, however, various crops could be tried on a somewhat larger scale, and it was found possible to substitute two more efficient methods for the old wasteful one. Certain crops, it was found, would not exhaust the fertility of the land as rapidly as others; certain crops would deplete the land for the same crop a following year, but could be advantageously followed by a different kind of crop. Variety of foodstuffs was the key to more effective farming as well as to a better dietary regimen, and the people of England were gradually introduced, not, however, without reluctance, to the eating of such hitherto despised foods as turnips, and to the cultivation of such leguminous crops as clover to enrich the pasturage of their cattle. A second method of maintaining the richness of the soil was through the application of fertilizers—about which knowledge was slow in accumulating, but which German chemists extensively advanced during the early 19th century. Along with more scientific crop-raising went the improvement of the quality of live stock, both by better feeding and by systematic breeding. At first, of course, the scientific laws of heredity governing improvement in the breeds of animals and plants were unknown, but on the simple hypothesis that progeny resemble parents, the better stocks were selected for breeding and the qualities of their offspring carefully measured. The result was that, during a few decades, the average weight of cattle and sheep, as well as the average milk yield of cows and the wool borne by sheep, had substantially increased.

At the same time the simple implements of the farm were being gradually improved—first by the introduction of plows and harrows of superior design and sturdier make which would cut more deeply into the soil, and form a better seed bed, and afterward by a long series of inventions such as the horse thrashing machine of the early 19th century. Toward all of these new devices, the smaller farmers often exhibited suspicion and resentment, especially when they saw themselves being undersold and driven still further into poverty by their use among larger cultivators. But increasing numbers of wealthy country gentlemen now took up scientific farming as a hobby, arranging cattle shows and farmers' clubs, and instituting annual competitions for the best products. As always in such cases, the momentum of initial wealth and efficiency increased the gulf between the richer and poorer farmers so that thousands of small proprietors and tenants were forced to give up their independence and wander from farm to farm or—oftener—to the cities seeking employment. For a brief period at the close of the Napoleonic wars, the price of grain fell rapidly and threatened the supremacy of the landowners, but this result was averted by severe legislation to keep the prices up, and in time the landowners recaptured their security because of the steadily mounting demand for agricultural products. By the second quarter of the 19th century the victory of the large over the small farmer was secure and England had become, as it still is, largely a country of large landed estates, differing in this respect from the other countries of Western Europe.

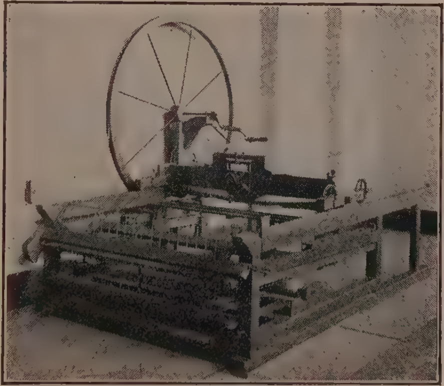
It is not surprising that considerable ingenuity should have been displayed in the attempt to increase the efficiency of plowing. It has been always one of the most universally necessary and most arduous of tasks. Here are a few of the many plows in use during the 18th century. There was little standardization then; most farmers were their own plowmakers. ((From *The Universal Magazine*, London, 1748.)

The ever-increasing rush of impoverished workers to the city prepared the materials for a similar revolution in manufacturing methods by concentrating large groups in factory towns under the "domestic system" and by enriching the employers through the cheapness of labor. Here, as in the case of agriculture, the distinctive new development which made the years between 1750 and 1830 unlike any other period in the history of the world, was the introduction of machinery and scientific technique. Had economic conditions not been right, however, the invention of a new mechanical device or two would doubtless have gone unnoticed as, in fact, it had gone many times before in history. Many of the fundamental principles of the new machinery, such as water power and steam, had been anticipated by the ancient Greeks and Chinese, and no doubt specially ingenious or lazy artisans had frequently invented new labor-saving devices during the succeeding years, only to have them promptly forgotten or forcibly suppressed. But now conditions were ripe and the slightest new invention was immediately sought out and widely used.

The first and most revolutionary inventions involved no great degree of scientific knowledge. Physics, mathematics, and chemistry had been developing tremendously throughout the three centuries since the Renaissance and lay almost unused in the books and minds of scientists. The faculties of pure science in the universities of France, Germany, and England, were, for the most part, not yet aware of or interested in practical applications, and it was not until well along in the 19th century that the great accumulated knowledge of pure science was to any great extent brought into the service of agriculture and industry.

2. *Technical Progress and Applied Science*

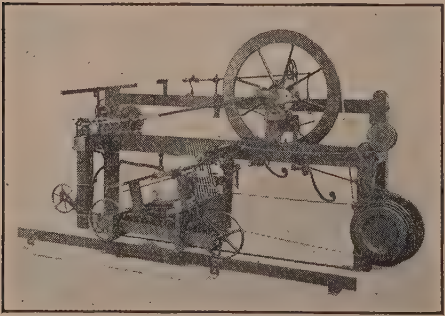
Necessity was here the mother of invention, and in this case the sharp pressure of necessity was felt most keenly in the textile industry of England. Produce as fast as it could, this industry could not keep up with the increasing demand for cotton, linen, and woolen cloth throughout the world. Within the textile industry itself there was considerable dislocation, since one of its branches, that of spinning, was much more slow and inefficient than the other branch, weaving. From the time of ancient Greece until the 18th century, there had been no fundamental improvement in the art of spinning, and the age-old spindle and distaff were still in common use. This was entirely a hand method by which the housewife, holding a mass of cotton on a stick in one hand, would slowly twist out a thread with the other, twisting and stretching it a little further by a weighted spool at the other end of her thread. During the early years of the 18th century, the spinning wheel came into considerable use, but even this did not produce any revolutionary increase in the speed with



Hargreaves' spinning jenny, invented in 1764, was the first attempt to spin several threads of yarn at once. It contained all the elements, except rollers, of the modern spinning mule, but was worked by hand. (The Science Museum, South Kensington, England. Used by permission.)

which thread could be spun. Between three and five spinners were required to keep up with one weaver, and the need was keenly felt for some device which would enable the process of spinning to catch up. The first invention, however, came not in spinning but in weaving, which still further increased the dislocation of the industry. In 1733, John Kay, a clock maker of Lancashire, devised a "flying shuttle" which greatly reduced the strength and labor required in weaving. It had been a difficult task, requiring the operation of a heavy wooden hand loom by which one parallel row of threads was alternately moved above or below another, while another thread was pushed crosswise between the two parallel rows, weaving them together. The process of pushing the shuttle containing this crosswise thread to the far end of the loom, then pulling it back again between another alternate series of threads, had been slow and arduous, and Kay's "flying shuttle" allowed the movement to be made easily without requiring the weaver to leave his position.

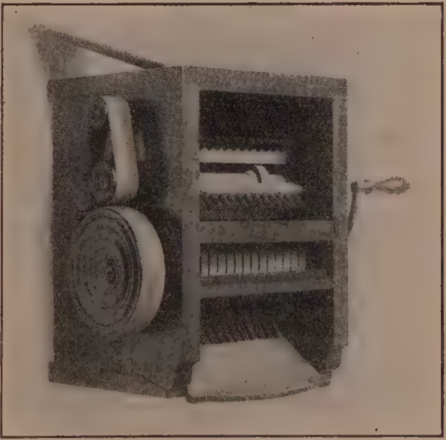
After this invention, the demand for cotton thread and for woolen yarn was more intense than ever, and in 1761 the Royal Society for the Encouragement of Arts and Manufactures offered prizes for an invention which would enable a spinning wheel to produce more than one thread at a time. The answer to this demand came from a weaver in Lancashire named Hargreaves who, in 1764, completed his "spinning jenny." This was a simple machine, operated by a handwheel and capable of running a number of threads at once. Within a few years the number was increased from eight to eighty, all without requiring more strength than that of a child's in its operation. Both the quality and quantity of thread produced were still further advanced in 1771 by the "water frame" of Richard Arkwright. Two important principles were now introduced: the operation of the machine by water power and (in an improved form of the machine known as the throstle) the pulling and twisting of the threads between two pairs of rollers somewhat similar to those now in use in the ordinary laundry clothes wringer. All the valuable features of the earlier spinning mechanisms were combined in 1779 by Samuel Crompton in his "mule jenny," the principle of which is still fundamental in the spinning industry, and which has been



Crompton's "mule" was a combination of Hargreaves' "jenny" with Arkwright's "spinning frame," which was worked by horse or water power. Crompton's machine has a movable carriage which carries the spindles back and forth, stretching and spinning the yarn at the same time. (The Science Museum, South Kensington, England. Used by permission.)

elaborated to the point where two thousand spindles can be operated at once by one person. Crompton's improvement allowed the production of fine cotton muslins, and the demand for these textiles would have quickly exhausted the supply of raw cotton available had not Eli Whitney's cotton gin in 1792 advanced the early phase of the industry similarly by providing for a rapid removal of the seeds from the cotton. These considerable improvements in the production and spinning of cotton placed the weavers in turn at a disadvantage, which was evened up by the power loom worked out between 1784 and 1791 by Dr. Edward Cartwright, a clergyman of Kent.

This loom was operated at first by water power, but its principle, like that of all the other machines, was readily adaptable to the use of steam as a source of energy. Water power was, on most of the rivers of England, rather limited by a sluggish flow and was difficult of application in the concentrated factory regions of Northern England. A steam engine, once made, could be set up anywhere and coal was ready at hand to increase its energy to an unlimited degree. When James Watt first made the steam engine practical in 1763, a natural energy was harnessed which could drive the newly invented textile machines with undreamed-of speed and certainty. In an older form of the steam engine which had been invented in 1705 by Newcomen, only a slow up-and-down movement of a piston was possible. The upward motion was produced by steam pressure, the downward motion by atmospheric pressure after the condensation of steam had created a vacuum under the piston. James Watt's chief improvement consisted in closing both ends of the cylinder and arranging for the piston to drive back and forth rapidly and entirely by steam. He also introduced regularity of motion by a device of revolving balls called a "governor," and perfected an arrangement of rod and crank which permitted the driving of a wheel connected by a belt with the machine which was to be operated. Steam was first used to run a spinning machine in 1785; fifteen years later there were scores of Watt's engines in use in the industrial centers of England.



Whitney's cotton gin consisted of a wooden cylinder encircled by rows of slender spikes set half an inch apart, which extended between the bars of a grid set so closely together that the seeds could not pass, but the lint was pulled through by the revolving spikes. A revolving brush cleaned the spikes, and the seeds fell into another compartment. (Courtesy U. S. National Museum.)

Still another line of technical improvement was immediately called into play by the demand for machines and engines to run them. Iron and steel were now needed in great quantities and the attention of the industrial world was devoted to the problem of efficient smelting of iron ore so that impurities could be removed quickly and the metal made strong as well as malleable. By 1735 an improvement in smelting had been begun through the substitution of coke for charcoal as a fuel, and twenty-five years later the process was further accelerated by the substitution of an air-blowing apparatus in the form of a cylinder, which replaced the crude bellows of earlier times. The process of "puddling" in 1783 introduced the use of coal with oxygen so that crude pig iron could be converted into malleable iron suitable for shaping into various forms. From then on, invention after invention rapidly followed in the mining and metal industries, one of the most conspicuous of them in the 19th century being the Bessemer process for making steel, and another the invention of chemical means for removing phosphorus and other deleterious substances often found in iron ore.

3. *Social and Political Effects of the Industrial Revolution*

The immediate effect of the introduction of these diverse inventions was poverty and suffering for the working classes. Not only were the independent farmers expelled from their land and impoverished, but the handcraftsman, too, was powerless to compete either in quantity or quality with the products of the machine, at least in such industries as textile manufacturing and mining, which were capable of standardization. The generation from 1800 to 1830 marks the lowest point in the welfare of the British working class, certainly in modern times, and, in many respects, in all history. Even the American negro slave of the same period had at least fresh air, fresh country food, and some time for rest and recreation. In Manchester and other factory towns of Northern England, during the same period, entire families were huddled in damp and poisonous cellars to sleep, and driven for 15 or 18 hours a day at the most wearing kind of labor in the factories. In the mines, they worked waist-deep in water, and in the factories breathed flying dust and gases. Their payment, and consequently their allowances of food and clothing, were incredibly small, for thousands of other workers were clamoring at the factory gates for employment and it was to the owner's interest to get as much as he could out of the worker and then to discard him ruthlessly for another. Many of the industrialists of the time were no doubt as cruel and selfish as they seem to us now, in the light of our more humane standards, but it would have been difficult for any single enterpriser to adopt more merciful methods. Competition among producers was extreme, and high wages or short hours in a single factory would have meant its rapid elimination from the struggle. It was not until factory owners as a class could be induced or forced to take reform measures all together that the terrible conditions of the early 19th century were to some degree alleviated. Nothing comparable to the wholesale suffering, demoralization, and early slaughter by fatigue and disease of the workers during the industrial revolution exists today, even though conditions are still very far from ideal.

That period of suffering was, in all likelihood, a transitional stage through which industry will never have to go again, for we now understand that there is no essential reason why machinery cannot be used for the advantage of all classes of society. Even the worker has, in the long run, substantially benefited by the securing of many goods at a low price, by a fair regularity of employment, and by the forcing up the level of his wages. These benefits his own united efforts, aided by humanitarian legislation, have won for him. But the effect of these improvements in the long run must not blind us to the reality of immediate suffering for the worker when a new invention throws him out of work for weeks or months and renders valueless his painfully acquired skill. Workmen, during the industrial revolution, could not understand the long-run advantage of invention to labor, and therefore protested violently against the supposed moral injustice of the improvements—even going so far as to smash newly invented looms and threaten the lives of their inventors and operators. But in subsequent years the workers have become, if not reconciled, at least accustomed to a steady stream of technical improvements, and are learning to adapt themselves to a constantly changing industrial world.

One of the broader effects of the industrial revolution has been the creation of a new sharp division between the enterpriser and the worker, the former being commonly a business man who has little interest in or sympathy with the actual processes of the manufacture. The worker no longer occupies a place in the factory like that of the "journeyman" in the medieval master-craftsman household. He feels much less interest in common with his employer, and tends to unite with other workmen in common antagonism to an owning class whose interests run counter to his. Even this drawback of the industrial revolution may in time be seen as a transitory one, at least to the extent that workers can more and more share in the ownership of the materials and the direct partition of profits in the industry where work is done; but as far as we have gone, the prevailing result of the industrial revolution has certainly been the formation of an urban working class, conscious of a common interest and holding the employer to be more or less an enemy—as the scattered poor of agricultural England never did.

Along with the creation of an almost propertyless working class has gone the rise in power of the middle class whose property consists chiefly in capital rather than in land. In England this rise of the middle class to power had been going on by slow degrees for centuries, but it was tremendously hastened, with the attendant fall of the landowning aristocracy, by the creation of vast new weapons of industrial wealth. In England, there was for several decades a sharp struggle between the hereditary landowning class and the newer industrial magnates whose wealth came from factories and other forms of mobile capital. This sharp division—like that between middle class and proletariat—is, to some extent, being bridged over by the sharing of interests. The descendants of the old feudal aristocracy, what few of them are left, have recognized the new basis of power and have joined ranks with the capitalists. The industrial revolution accomplished finally the result which had been so gradually led up to—that of making the size of one's share in the ownership of the machinery of industry the greatest single factor in determining one's political and social status.

CHAPTER 3

THE AMERICAN BACKGROUND

1. *General Features*

To some extent, the American phase of the story may be regarded as a continuation of the trends we have been observing: as a process in which American industry has gradually overtaken and partially outstripped the rest of the world in the race toward mechanical organization. But it is important to notice at the same time some outstanding differences between the American and the European scene, which have substantially affected the trend of events on this side of the water.

By far the chief of these has been the existence, until well along in the present century, of large tracts of almost unused land, rich in unexploited natural resources. Along with this fact, there has been until very recent years a chronic scarcity of labor. Thus the situation in Europe—scarcity of land and excess of labor—has been directly reversed. In consequence, steady streams of immigrants from all parts of Europe have converged upon the American continent, to join in transforming it from a wilderness into a vast expanse of farms, towns, mines, and factories, connected by an intricate network of railroads and telegraphs. From the time of the earliest Colonial settlers, they have arrived with a certain feeling of escape from European customs and traditions, both economic and social. Not knowing exactly what awaited them, holding stubbornly to a few shreds of their ancestral cultures and never completely fused into a new homogeneous group, they have nevertheless been plastic, easily directed into new industrial and commercial enterprises; while European industry is to this day hampered by the habits of a more set and leisurely age.

The historian of the future, with a longer perspective on the first three centuries of American economic history, may pass rapidly over what seem to us the major landmarks of our past—the Revolution and the foreign and domestic wars which succeeded it—and may, instead, look upon these three centuries as one introductory chapter in the life of a modern nation. He will review the diversity of names and minor struggles as incidents in a single epoch: that in which the pent-up masses of Europe, finding a new continent opened to them, poured like water into an empty vessel, filling it up to the level of the one from which they came. But he will see them, less like water than like molten metal, being steadily organized into the human wheels and pistons of an enormous machine for the standardized production and exchange of goods.

2. *The Colonies and the Revolution*

Already the stream of history has carried us so far from the economic conditions which prevailed only a century ago, that it is hard to imagine them as an actual mode of life. A building, a tool, or a piece of handicraft from 1830—and much more so any that dates back to Revolutionary days—has all the quaintness of antiquity that in Europe attaches only to much older relics. Ordinary furniture, glassware, pots and pans, tools, and clothing of a century ago are already scarce enough here to be sought after as "antiques," while in Europe they are common enough to be disregarded unless notable for some reason other than their age. Here the things of yesterday have been almost completely swept away, while there modern life goes on in a setting still partly medieval and renaissance; amid, or not far away from, ancient cathedrals, châteaux, and narrow winding streets full of distant associations. Because of these, even the remote past is still, in some ways, a living present.

Along our populous Atlantic coast, thickly covered with new buildings and smooth pavements, it is not easy to picture the early colonists in their small plantations at the edge of forests, clinging precariously to the rivers and clearings. They looked westward to a savage and boundless wilderness; eastward to a world of ancient hatreds and loyalties which seemed a little dim and unimportant from across the ocean. Over there they saw an old world preoccupied with its own affairs, but tax-hungry and sporadically dictatorial toward its distant children. There was small spirit of unity in the colonies; in spite of racial consanguinity far greater than exists today, they were a scattering of isolated and mutually suspicious groups, with little intercommunication or power of self-government. There was a mixture of the 18th century England of spinning wheels, minuets, and stage-coaches, with the crude hardiness of frontier life, where each family must struggle against nature as a self-sufficient unit; the father hunting, chopping, and plowing with a watchful eye to Indian skulkers, the mother doing superhuman labors at cooking, spinning, weaving, sewing, nursing, and teaching.

The old mail and passenger coaches did not make communication and travel so quick or so easy as to threaten local cultures with the infusion of alien ideas. This is a "Relay on the Old Boston Post Road." You will doubtless sometime travel over this old road. When you do, carry this picture in your mind for contrast. The lad in the foreground might be the hero of Aldrich's *Story of a Bad Boy*, or even Plupy Shute. (From *Harper's Weekly*, March 6, 1886. Used by permission.)

Agriculturally, the age was unscientific and wasteful in the extreme. With plenty of land and few to till it, there was no inducement to practice that intensive farming which tries for the maximum of produce from each acre of soil. Far more easily, one could drain from each plot its surface richness, then move on somewhere else. Manufactures were few and simple, being discouraged by the mother country in accordance with the mercantile theory. On the same policy the production of naval supplies, such as lumber, masts, tar, rosin, and turpentine, was encouraged by liberal subsidies with the aim of building up England's naval power and self-sufficiency. Iron mining, smelting, and the manufacture of metal utensils, hunting, fishing, whaling, and the fur trade were other developing activities of the colonists through most of the 18th century. The constant labor shortage was partially met by the importation of indentured servants, voluntary or involuntary (the latter including many debtors and petty criminals), who were bound to some master for from three to seven years in payment for their passage. In the 18th century the labor supply was greatly increased by slaves from Africa, so that by 1790 there were three-quarters of a million Negroes in the United States, representing nearly twenty per cent of the population.

The American Revolution marked the definite breakdown of the mercantilist policy toward colonies. The theory that a young and vigorous community, surrounded by every opportunity for many-sided economic growth, could be held in check for the benefit of a distant government whose protection it no longer needed, was doomed to be swept aside as soon as the new group had acquired sufficient power to assert itself. For several decades before the final conflict, the colonists had grumbled against irksome taxes, against commands prohibiting manufactures which they felt themselves well qualified to undertake, and against laws compelling them to trade in certain articles only with England, by way of English ships. In addition, since the balance of trade was always against them, they were hampered by a lack of adequate currency to carry on commerce, and they were forbidden to issue paper money of their own. For a time, especially during the French and Indian War, the repressive laws were not seriously enforced, and all sorts of violations flourished, especially smuggling. But at the close of this war in 1763 a program of strenuous enforcement was announced, which the colonists resisted stubbornly. Once embarked on open defiance, their growing spirit of independence found no stopping-place short of complete political separation, an outcome which alone they might have been too weak to achieve, but toward which they were materially aided by French assistance and by divided opinion in England.

3. *Growth and Expansion*

Immediately after the Revolution, there ensued a critical period in which the new nation struggled to get upon its feet, under the almost crushing burdens of debt, inflated currency, political disunity, and economic disorganization. Peace brought the end of many industries which had flourished during the war, and a flood of cheap imports from England which overwhelmed Anerican competition. Most serious of all was the spirit of mutual hostility among the states, because of local tariff and boundary disputes, and unwillingness to shoulder the burden of war debt in common. In addition, there was a class division between the poorer elements (such as mechanics and small farmers) and the rich plantation owners and merchants. Opposition to the Constitution came chiefly from the former group, who felt, not mistakenly, that the new laws were being framed largely for the benefit of the latter. However undemocratic and unjust at the moment, it was fortunate for national unity and future economic progress that the more educated, propertied, and nationally minded minority gained the ascendancy long enough to build a stable political machine and lay down a constructive financial policy. Through the genius of Hamilton, the first Secretary of the Treasury, Congress was given powers of taxation, and the credit of the United States was established through payment of the foreign debts. Payment of the domestic debt through redemption of paper money, bonds, and certificates was hotly contested by the poorer class, on whom as always the penalties of deflation fell most heavily. In 1790 the certificates of indebtedness were declared redeemable at par, and most of the paper money at a hundred to one. The establishment of a national bank in the following year provided for a stable currency, and for a financial mechanism whereby the federal government might coördinate its various undertakings.

Square-rigged clippers gave America her one-time supremacy in the ocean carrying trades. Perhaps you have read of them in some old tale of Gloucester or Salem. They were then the swiftest ships afloat, and brought the merchandise of China, California and the West Indies to the Eastern seaboard. The New England ships also brought black cargoes from Africa, bought with Jamaica rum or bright cotton cloths; and thereby hangs a tragic tale! (Wide World Photo.)

The first sixty years of the 19th century were years of rapid development in manufacturing and commerce under the impetus of the industrial revolution and of a steady westward flow of population, shadowed more and more toward the end by the menace of the slavery issue. Up to the War of 1812, much of the country's wealth and energy was directed toward the sea, and American shipping grew to proportions greater, with respect to other economic activities and to foreign shipping, than it has ever since achieved. After the war the rights of American shippers were nominally safer, and the introduction of swift "clippers" prolonged for a time their prestige on the seas; but the nation's interests began turning in other directions. With the aid of Whitney's cotton gin, and of power machinery for spinning and weaving modeled after the English, the cotton textile industry flourished in New England, and those of woolen and metal manufacturing followed in its wake.

Meanwhile the hunter and fur trader were being followed westward by farmers, prospectors, and cattlemen, down rivers and through forest trails, and villages peopled by the slightly less adventurous sprang up where they had passed. Against the protest of eastern landowners, laws were enacted to provide for the cheap sale and finally (in 1862) for the outright gift of western lands to homesteaders. Turnpikes, bridges, and canals pierced the wilderness to convey the pioneer families in their covered wagons or barges piled with household goods. Land speculation and the overly ambitious construction of canals and railroads more than once brought on panics and temporary depressions; but with steam power harnessed in river boats and railroad engines, and with visions of adventure, free land, and California gold ahead, the westward march was irresistible.

4. *The Civil War*

In its train came the bitter and disastrous conflict over the issue of slavery or freedom in the new regions thus occupied. For the continued prosperity of the South demanded a constant increase in slave territory, both to provide a market for the sale of slaves themselves, and to provide new land for cotton, since the wastefulness of slave labor in the southeast had been exhausting the fertility of the soil for many decades. The South demanded not only extension of the slave principle but easy terms for the distribution of new western land to pioneers, to both of which the northeastern farmers and manufacturers were opposed. In addition, the latter group was calling for a steady raising of the protective tariff, which ran directly counter to the interests of the agricultural South. Relying excessively upon the world's need for cotton to finance armed resistance, the southern leaders were disappointed in their hope of European support, and were prevented from shipping out their cotton by the northern blockade. The slow destruction of the Confederacy brought inestimable loss to all sections of the country: but the placing of agriculture upon a basis of free labor was a change whose economic value to the South as well as to the North has since been amply proved, aside from all question of social and moral progress. Throughout the country the war gave an impetus to manufacturing, to the diversification of crops, to the use of agricultural machinery, and to more intensive, economical methods of farming, and after the chaos of reconstruction was over the southern states began to share substantially in the consequent renewal of prosperity.

The train's in!—excitement enough for a whole day in this small American town in the sixties. The "iron horse" was then still looking westward toward great wastes of Indian-ridden desert yet unconquered. (From *Harper's Weekly*, Aug. 15, 1868. Used by permission.)

5. *Transition to the Present System*

As one looks backward from the second quarter of the 20th century, even the period from the Civil to the World War is beginning to appear as a distinct and vanished economic order. Although American life in that period had become continental in extent, and although the machine-power and factory system had prevailed during the greater part of it, nevertheless it differed in important respects from the present epoch. It was essentially an age of relatively free enterprise by individuals and small unconsolidated groups, an age of financial and commercial buccaneering, of mad scrambling after untouched lands and resources, and after control of newly founded industries and public utilities. Roads, canals, telegraphs, railroads were flung out with optimistic enthusiasm; spectacular successes and failures were everyday occurrences. Scarcely hampered until the 20th century by regulative laws and commissions, ruthless financiers fought down their competitors with cutthroat methods, and manipulated stocks until successive panics left a few great fortunes and many sudden paupers. It was "the golden age of *laissez-faire*," the golden age of business adventure; and also of the reckless waste of natural resources. It was an age of bitter class and sectional rivalries—between the North and South, both long cherishing rancors from Civil War and Reconstruction days; between eastern industrialists and western farmers; and between employers and labor unions, both sides quick to resort to physical violence. It was a period of tremendous and accelerating progress in machine technique by the use of applied science; of expanding foreign trade and ambitious imperialism; of continuously mounting waves of immigration from every part of Europe.

6. *Science and Power*

A further glance at each of these aspects in turn will help to clarify our picture of this transitional age between the old and the new America. In the field of mechanical power, first of all, as the great development of the early 19th century had been the use of steam, so in the second half of that century electricity (produced by coal or water power) and gasoline, a refined petroleum product, came to hold the center of the stage. So tremendous a potential source of power was the dynamo that Henry Adams, a meditative historian of the period, was moved by observing it at the Chicago exposition of 1893 to call it the distinctive symbol and motive power of modern civilization. By its use the telegraph, telephone, electric street car, incandescent lighting bulb, and the countless adaptations of the electric motor became rapidly practicable. Each new invention made possible a score of others, as, for example, when the Edison lighting bulb made possible the projection of moving picture films, and the telephone (along with theoretical study of the properties of electromagnetic waves) led to the wireless telegraph, telephone, and radio. The discovery of oil in Pennsylvania in 1859 had tapped another tremendous source of power, and soon both were harnessed together: the electric ignition system being the essential device needed to make the internal combustion engine practicable, and hence to bring into being the automobile and airplane. With or without the added principle of artificial power, new machines like the mower, reaper, and thrasher inaugurated a new phase of the agricultural revolution. In consequence of power-driven machinery, the value of manufactured goods came, during the decade between 1880 and 1890, to surpass farm products as the principal source of American wealth. By 1900 the United States could be said to be primarily a manufacturing nation.

No less ingenious than the mechanical and electrical engineers were the industrial chemists. Turning to practical use the great store of theoretical knowledge accumulated in previous centuries, they pursued the aim of economical, large-scale production of the elements and compounds, the salts, acids, ammonias, and alcohols of modern industry. These scientists analyzed crude petroleum into its derivatives, and gave the world not only cheap gasoline, benzine, kerosene, and paraffin, but innumerable dyes, lubricants, medicines, and flavoring extracts. They sought by mining nitrate and phosphate rocks, by using vegetable matter and even by exploiting the air, those substances the soil requires to keep it continuously fertile.

The distinctive symbol of our civilization: a dynamo or electric generator converts mechanical into electric power through the continuous movement of a set of electric conductors across a magnetic field. Faraday, in 1831, first collected a continuous current by rotating a copper disc edgewise between the poles of a horseshoe magnet, and closing a circuit through two rubbing contacts. The picture above shows a modern group of enormously powerful descendants of Faraday's invention. (A Margaret Bourke-White Photo.)

7. *Agrarian and Monetary Issues*

Although applied science and industrial organization tended in the long run to benefit both farmer and manufacturer, the huge growth and shifting of wealth at this time greatly aggravated the conflict of interests between these two classes. The sharpest partisan clashes in the period under discussion, the most vexatious problems of tariff and monetary legislation, arose from this underlying conflict. A perennial source of friction from the earliest days of the Republic, it began to assume a new and acuter form soon after the Civil War. The immediate effect of the war was to create a larger market and higher prices for agricultural products. The distribution of homestead land and the branching out of railroads had combined with this fact to stimulate rapid occupation of land during the sixties and seventies, much of its purchase price financed by borrowed money at high interest rates. In the panic of 1873 this too-impetuous movement of expansion received a rude shock; a period of declining prices revealed that both farm and manufactured products had been overproduced. With a suddenly diminished income, the farmer was hard pressed to pay his debts. To increase his woes, the government was striving to reduce the currency inflation to which it had been forced during the war: to resume specie payment, and to eliminate the "greenbacks" or fiat money which it had issued without backing in

Steam power and speedy transportation. How can they be made to benefit all groups in the population, without special favor to any? (Courtesy Pennsylvania Railroad.)

precious metals. The farmer who borrowed in 1864 received a paper dollar worth forty-three cents in gold: but the progressive deflation of the next two decades forced him to pay back interest and principal on the basis of a dollar worth over twice that amount. In addition to all this, he harbored a grievance against the railroads: they charged, he felt, exorbitant freight rates. The eastern monopolists also gave him low prices for his products, while others charged him, through the aid of a protective tariff, high prices for the manufactured articles he had to buy.

The result was a long, bitter, and unsuccessful struggle on the part of the farmers (who made up most of the debtor class) to prevent deflation and secure more cheap money: first by increasing the circulation of greenbacks, and later (in Bryan's 1896 campaign) by securing the free and unlimited coinage of silver at a ratio of 16 to 1, which would have tended (silver having declined in value) to produce the same effect—a cheap dollar. At the same time successive agrarian groups, especially the Populists, strove to pass a series of laws restraining the railroads and other monopolies. In particular, they demanded a lower tariff, a graduated income tax, government ownership of railroads and telegraphs, shorter hours for urban laborers, direct election of United States Senators, and the initiative and referendum. Greater prosperity and an influx of gold at the close of the century put an end to the plea for inflated currency, and in the campaigns of Roosevelt and Wilson the democratic reforms just mentioned came to the fore as aims of the progressive and agrarian groups, with woman suffrage as an additional goal. These were partially accomplished through the sixteenth, seventeenth, and nineteenth amendments to the Constitution, and through the Wilsonian program of economic reform. But the World War brought on yet another period of deflation and agricultural distress, and each recent political campaign has demonstrated that the farm problem is still one which is far from settled.

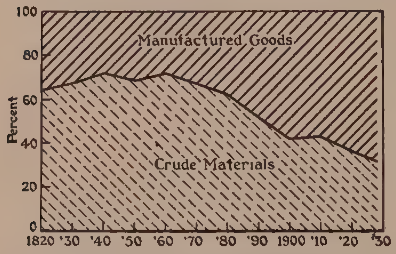
8. *Regulation and Consolidation*

The demand for government regulation of railroads, which arose as an outcome of agrarian unrest, was also a phase in a much more far-reaching movement: the general decline of the *laissez-faire* policy throughout American industry. As we have seen, that policy had been a reaction, stimulated by the Industrial Revolution, away from the excessive governmental regulations of the mercantilist period. In America, it had been further stimulated by the frontier conditions and the wealth of land and resources to be exploited—conditions which had naturally set a premium on individual initiative. During the seventies, eighties, and nineties, when the pinch of hard times was being felt by farmers and laborers, there were further prizes to be scrambled for by the capitalists, in the shape of growing industries, banks and public utilities, and the government's remaining lumber, oil, and mineral lands. Scarcely any effective legal restrictions existed to set rules to the game; officials and legislators were bribed, the broad humanitarian provisions of the Constitution evaded, and the most ruthless methods of crushing weak competitors employed. The only major governmental violation of *laissez-faire* theory, the protective tariff, operated to favor the large capitalist.

Such a condition of wholesale disorder and conflict was necessarily transient. Its elimination was achieved in part by democratic reform legislation, but in a much more fundamental way by the spontaneous consolidation of capitalistic industry itself. Much of the specific reform sought by progressive elements has, in fact, been of a sort to breathe artificial vitality into the dying *laissez-faire* system itself: especially the Sherman and Clayton Anti-trust Acts, which sought to prevent large combinations, and keep the small competitor on his feet a little longer. This line of effort, although much in the public eye, has been only superficially successful. Many proposed railroad mergers have been restrained and a few large concerns, such as the Standard Oil Company, have been dissolved at little if any loss to their owners, only to find some equally good method of working together. The holding company in particular, as a device for concentrating stock ownership, has been highly effective in evading anti-trust legislation. Banking and credit have been ever more solidly massed under centralized private control, and even in retailing, one of the last strongholds of individual enterprise, the chain store is fast coming to dominate. It might be convincingly argued, indeed, that out of the long list of economic reforms of the decades before the World War, only those have been allowed to operate which in the long run proved advantageous to big business itself. Individual big business men might and did protest loudly against the imposition of uniform freight rates, against a powerful Interstate Commerce Commission or Federal Reserve Board; but on the whole these few brakes and coördinating agents have worked to the advantage of their class, rather than as weapons in the hands of farmers and laborers against them.

On the specific ways in which capital and industry are concentrating, much will be said in later chapters, and in the present connection it will suffice to say that the process has been one of astonishing magnitude and acceleration. The past few years have seen, in particular, a wave of bank mergers. One firm after another has combined to form huge institutions whose capital runs close to or over the billion mark, and which are thus able to handle the enormous loans required by industrial projects likewise undertaken on a stupendous scale. In this way financial consolidation is aiding and accompanying that of commercial and industrial management.

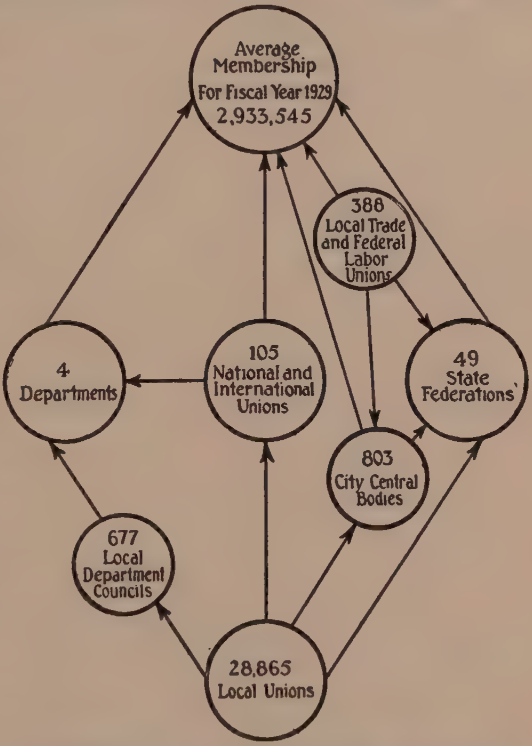
In all these fields, moreover, the process is increasingly world-wide in scope. The network of international credit, rudely torn and distorted by the World War, has been mended and further developed to the point where it constitutes a most powerful factor in determining all international relations. In the years to come, such economic bonds, rather than treaties and political leagues, may be the chief means of maintaining world peace, although the germs of imperialistic rivalry and the onerous burdens of war debt still remain as potential menaces. Whatever the future outcome, it is certain that the United States, as the world's creditor and banker, has achieved a position of economic eminence from which it can play a much more constructive and dominant rôle in international politics than it has ever chosen to play in the past. Its gradual ascent to this position in the hundred years from the War of 1812 to the World War may be traced through a series of conspicuous manifestations: the agreement with England on the Monroe Doctrine; the Mexican, Civil, and Spanish wars, the last of which left America with imperialistic stakes in the West Indies and the Far East; the completion of the Panama Canal, and finally the decisive entrance into Europe's great struggle, after three lucrative years as purveyor of ammunition, money, and supplies to the combatants. But behind all these events, and necessary to their occurrence, has been the steady growth of internal prosperity, and of American participation in the world's peaceful commerce. From the first the agricultural and extractive industries have been prolific enough to supply a large margin for export, and until recent years America has been in foreign trade, like most young and undeveloped countries, primarily an exporter of raw materials. But in recent years the proportion of raw materials in our imports has increased; in our exports the proportion of raw materials has decreased, while that of manufactured articles has risen. This trend has been pointed out by observers as symptomatic of a fundamental change in our status among other nations: from a youthful stage in which natural resources and raw materials were too abundant to be absorbed by the population, to a mature condition, more like that of the older nations of Europe, in which a larger population and more highly developed manufacturing system readily absorb the raw materials, and turn to the remaining unexploited regions of the earth to supplement them.



How great a change has occurred in the nature of our exports is illustrated here. (Data from Statistical Abstract and Survey of Current Business.)

9. *The Labor Movement*

Along with the consolidation of capital, the period from the Civil to the World War included a parallel but less thorough consolidation of labor. From 1827 on, there had been strong but sporadic movements toward the formation of unions, local at first, then (in the fifties and sixties) national in scope, until by 1870 thirty powerful national unions were functioning, with trade assemblies in every important city. Weak organization and the panic of 1873 brought this first phase of the labor movement to a close, and there followed two decades of chaos and uncertainty, with various labor leaders pulling in different directions toward affiliation with one or another of the more radical political groups. During this period of confusion were formed the two great national organizations which have dominated the American labor movement: the Knights of Labor and the American Federation of Labor. The former, which by 1886 had grown to number 700,000 members, was a miscellaneous association of almost all types of workers, yet though it lacked cohesion, it represented a movement with militant ideals. As Professor Commons remarks, "it bore in every respect the aspect of a social war . . . Extreme bitterness toward capital manifested itself in all the actions of the Knights of Labor." Such changes as an eight-hour day, income and inheritance taxes, postal savings banks, workmen's compensation, and government ownership of public utilities were its specific aims. Although it rapidly declined in the later eighties as a result of internal strife and external opposition, it did much to make the labor movement nationally self-conscious, and most of the specific reforms at which it aimed have since been at least partially achieved. The American Federation of Labor, organized on the basis of uniting craft unions on a national scale, had a steady and persistent growth, and in spite of a decline in membership after 1920 is still by far the most influential workers' organization in the United States. By contrast with the idealistic Knights of Labor, and with the revolutionary Industrial Workers of the World (organized in 1905) it has emphasized the importance of practical, immediate results in the form of better wages, hours, and conditions of work. It has exerted an indirect


Average Membership For Fiscal Year 1929 2,933,545
388 Local Trade and Federal Labor Unions
4 Departments
105 National and International Unions
49 State Federations
803 City Central Bodies
677 Local Department Councils
28,865 Local Unions

An organization chart of the American Federation of Labor. Adapted from a chart of the A. F. of L.

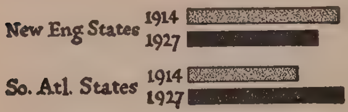
influence toward some legislative reforms, but (by contrast with the Socialist Party) has refrained from putting its own candidates in the field, and as a rule, from any other form of direct political action. Outside the A. F. of L. there grew up in the second half of the 19th century a powerful, wealthy, and conservative group of railroad workers' brotherhoods, and a few large, radical, and loosely organized unions of the industrial type, such as the Amalgamated Clothing Workers. The latter type, which includes all workers in a single industry with little regard to craft distinctions, has shown a recurrent vitality in spite of a tendency to internal friction, and in spite of opposition from the craft unions as well as the employers. It may well be the form of the future.

Seventy-five years of effort on the part of American labor leaders have not succeeded in organizing American workmen to any degree approaching the European unions; they have not achieved general recognition of the closed-shop principle in industry—on the contrary, many of the largest employers are successfully excluding all union labor; they have come nowhere near achieving for labor what liberal social philosophers would call a fair share of the nation's income, and it is even questionable whether labor has relatively held its own in the last half century's enormous increase in wealth. But from two other points of view their efforts have been not at all disappointing. With the aid of a growing humanitarian spirit on the part of the general public, they have achieved a considerable advance in working conditions and standards of living, much of it through social legislation and much through collective pressure on employers. How much of this would have occurred in any case as a result of increased national prosperity it is of course impossible to estimate; but in view of the constant stubborn resistance to according labor its share in this increase, it is safe to credit organized pressure, actual or feared, with a great deal of it. With reference also to the obstacles it has had to contend against, the American labor movement has been far from unsuccessful. Among these we must recognize not only the bitter opposition of capitalist employers and the officials in their control, but the long-standing public sentiment in favor of *laissez faire*, which has been slow to grant that a strike or boycott could be anything more than a criminal conspiracy against public interest, or a union organizer anything but a trouble-making outside agitator. Moreover, as always in the history of labor, periods of depression have weakened the worker's power to resist, while periods of prosperity have made him shortsightedly contented, unwilling to organize or fight for more. Labor's most fundamental obstacles, perhaps, have been within its own ranks. Excitable and often ignorant masses have been urged this way and that by self-seeking demagogues, doctrinaire idealists, time-serving officials, and violent revolutionaries. Their forces have been split into hostile groups. Amid the confusion a few sane leaders endeavored to turn the majority toward a more practical and progressive policy; but success in this has not been remarkable. Leadership has tended to remain in the hands of the less imaginative and more conservative leaders, and their policy has been severely criticized for its lack of industrial foresight and its determined clinging to *laissez faire* and craft unionism.

10. *Immigration and Social Mobility*

The relation of labor to immigration is an outstanding example of the intricate conflict of interests and emotions which has always hampered its program. On the whole, it has been to the interest of employers to increase immigration and thus secure cheap labor; and of the workers already in this country to keep back the flood of potential contenders for their jobs. But on the other hand, the rapid growth in prosperity of the country as a whole would have been impossible without constant large increments of unskilled labor, and the American worker has shared substantially in the resultant wealth. Indeed, as mentioned in a previous chapter, each new wave of immigration has tended in the long run to push upward into more responsible positions the fittest members of the earlier waves, and their descendants. There has been a strong intangible sentiment, moreover, among each group of immigrants to bring after it the relatives and friends left behind, and to protest any apparent discrimination by "quota laws" against its own race or nationality. But the immediate effect of each new increment has certainly been a downward pressure at the lower end of the wage scale. In addition, the unskilled immigrant has been hard to organize into effective unions, being usually ignorant of the language, poor, meek, confused, suspicious, and afraid to resist his "betters." He has generally drifted at first into miscellaneous unions of the industrial type, if into any at all, and the great gulf between him and the skilled, highly-paid craft member has been difficult to bridge with any sentiment of "working class solidarity."

In the swirling cross-currents of the last seventy-five years, no economic or social stratification of any kind could be more than transitory. While the incoming floods of humanity were in a sense destructive of national unity, since they brought with them a Babel of languages and traditions which defied assimilation by the old Anglo-Saxon culture, in another sense they have fostered a sort of loose unity, by overwhelming the sharp sectional lines that brought tragedy to our middle years. Not only has the definite class-war schism of other countries been impossible to maintain, but all geographical and other groupings have tended to melt in the constant shifting of population, and in the constant economic changes at any one locality. The schism between North and South, once so sharp and bitter, has gradually been swept over. Hordes of negro laborers have migrated to the North and have given place to many new immigrants to the South. The last few decades have seen tremendous strides toward the industrialization of the South. Mines, water power, and (temporarily) cheaper labor have called many factories and much capital there from the North, so that a serious industrial slump threatens New England. As the latter area was drained of most of its farmers by the middle west fifty years ago, so now it sees its textile and other enterprises being seductively beckoned away, and as yet no one knows how the movement will end. The farming population is more than ever scattered, diversified. It is interspersed geographically with cities and towns, urban in interests; it is Republican by tradition here, Democratic there, and slow to abandon those traditions for the sake of an agrarian bloc; it contains Polish blood in New England, Scandinavian in Minnesota, Italian and Japanese in California. Each of these strains is sympathetic with certain elements and ideas in the urban communities, so that an urban-rural demarcation, political or otherwise, is hard to maintain in the country as a whole. Protestants, Catholics, and Jews, wets and drys, workers and capitalists, Democrats, Republicans and Socialists, liberals and conservatives, separate here and there into vague temporary groups on certain issues, then join hands with other groups on other issues.



A phase in the industrial development of the New South. This diagram shows (in thousands) the number of active cotton spindles in the New England and in the South Atlantic states, in 1914 and in 1927. How will New England compensate for its loss of sovereignty in cotton manufacture? (Data from U. S. Statistical Abstract.)

11. *National Coming-of-Age*

There are prophets who maintain that this fluidity is another aspect of the passing epoch; that we are entering a period when stratification of some sort will be inevitable. If so, along what lines will it be? There are no clear indications, and one man's prophecy is as good as another's.

Certain it is, however, that two of the factors which in the past have made for social and economic fluidity are now at an end: unoccupied public land and unrestricted immigration. As long ago as 1890 the frontier (technically an area with more than two and less than six inhabitants per square mile) had ceased to exist, being so broken into by isolated bodies of settlement that no definite line could be distinguished. For forty years more, those prairies, deserts, and forests have been gradually filling up—by no means to a saturation point, to be sure, but to a point where there are no large areas of complete wilderness. The great wild middle west, which seemed not so long ago illimitable and unconquerable, is dotted with towns, ranches, and oil-wells, and ridden by cowboys in the employ of large syndicates, who read newspapers and listen to radios like any city-dweller, and who do considerably less shooting than is done in the gang-infested districts of large cities. The fertile homestead land has practically all been taken up, and there remains little but arid or swampy land requiring expensive equipment to irrigate or drain. The Indian, poor or rich, is a thoroughly tamed and unromantic figure. The great primeval forests, except in a few stretches of the Northwest, have been turned into boards and wood pulp, with the incidental result that rich topsoil is being washed away, and disastrous floods have become a common occurrence. Daniel Boone and Leatherstocking, the pioneer with his ax and flintlock rifle, sound as mythical to the American schoolboy as King Arthur does to the English. Prospecting for oil and metals has become a problem for science and large business enterprise, with the lawless adventure left out.

Since the war, that familiar sight of our city streets and railroad stations, the newly arrived immigrant with his bundle, is likewise becoming rarer. Stringent quota restrictions have reduced the incoming flood at Ellis Island to a moderate stream, which is more readily absorbed. Relatives and friends, of a little longer standing as Americans, are often ready at hand to hustle the wondering "greenhorn" into proper garments, jobs, ideas, and slang. The foreign quarters of our cities are fast losing their exotic aspect; prosperous shops, banks, and restaurants line their thoroughfares, in close imitation of more fashionable streets, and they are paraded by smoothly tailored youths and fur-coated girls whose racial origins are more and more lost in a standardized type. The great waves of humanity from Europe and Asia have landed and spent their force: the English, Scotch, and German pioneers, the Irish who laid our railroads and raised our brick walls in the seventies and eighties; the Italians, Poles, and Jews of more recent arrival; the Chinese, Japanese, and Mexicans of the far west and southwest—all are here, and have found their places as governors, bank presidents, farmers, or bootleggers. Their children see life through eyes ignorant of any world but the new one. Other immigrants may follow in smaller numbers, for generations to come; but they will enter an established social order stretching from coast to coast more similar to the ones from which they came, and less boundless in its opportunities for individual pioneering.

In terms of the major tendencies we have just been observing, the American people have now come of age as a mature nation, more like the nations of Europe than ever before in its conditions and problems. Henceforth a large and well-distributed population must live in a territory whose resources are no longer unlimited, and in which the main lines of a complex economic system have been definitely laid down. The era of unthinking extravagance and unlimited license for business privateering has passed, and a new era has begun whose nature can now be only dimly and uncertainly foreseen.

To say that we are closing a period of disorderly freedom is, however, by no means equivalent to saying that there will be no more fundamental economic changes, and no more scope for individual genius to assert itself in the industrial world. It means that a period of aimless wasting of natural goods and human energies is being slowly superseded by one of organized social control. As the following chapters will show, our economic machine is still so far from completion that no one with the spirit of an organizer, adventurer, pioneer, or reformer need in the coming century at least fear the lack of opportunities great enough to test all his powers.

CHAPTER 4

SOME GENERAL CHARACTERISTICS OF THE PRESENT SYSTEM

1. *Inequality*

At this point it may be useful to describe, in brief and summary form, a few of the outstanding features of the present order. One of these is the very gradual differentiation in economic status between one extreme and the other. We shall speak of poverty, comfort, and riches, with the frequent caution that it is impossible to draw any definite lines of demarcation. But it is at least clear that there are great differences among the abilities of various people to buy the things which make life pleasant and make it educative. We shall see extreme differences not only in the ability to have trivial amusements and luxuries, but also in the ability to secure the very necessities of existence. We shall devote a moment's glance to the millionaire's family with its palaces, yachts, and banquets, and a moment's glance at the other end of the scale to the isolated family of the farm laborer which is not only deprived of fine clothes and delicate foods, but is often forced to go without sufficient food and clothing to maintain health.

We shall also notice that the quality of life from an economic standpoint is not solely to be measured by the goods a person is able to surround himself with: these loom very large when one is considering the leisure and family life of the individual; but there remains his or her working-day—the activity which produces income. This may be something enjoyable and educative in itself, or it may be of value merely as a means to the prolongation of life. In this regard, we shall cite, in some detail, examples of narrow, monotonous, and generally unsatisfactory occupations in factory and sweatshop, as well as on the mountain or prairie farm. Some men are engaged in activities which tend to debase them mentally and to drain their vitality, thus making of life itself a blind alley; others make a living by doing work which is itself inspiring and instructive. Some types of work are mere drudgery; some are as delightful as play. Some are dangerous, subject to accidents and diseases; others are performed under conditions which make for health and safety. Of course, these two aspects of a person's day cannot be considered quite separately because the income of a person determines very largely the type of work which he will be able to do or fit himself to do. But, as will be seen in future chapters, it is often worth while to consider the activities of production both from the viewpoint of their efficacy as means to an end, and from that of the quality of life which they involve directly in themselves.

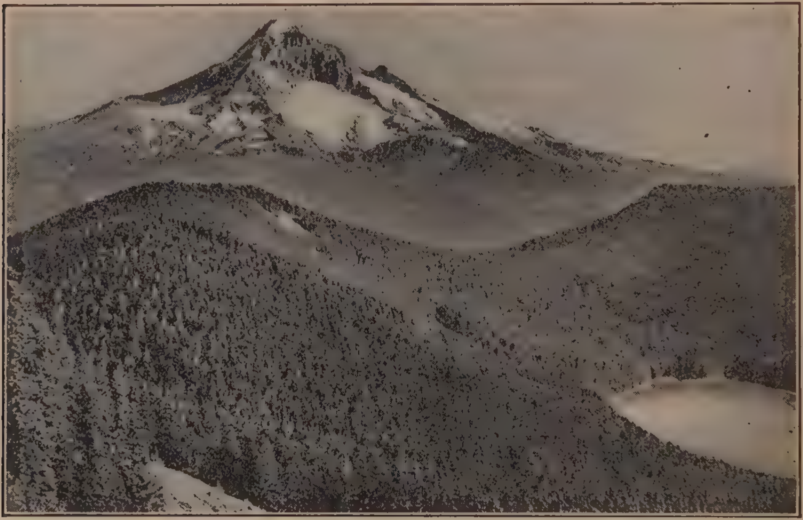
2. *The Surplus and Its Apportionment*

The very existence of a wealthy and comfort class is evidence that there has been accumulated a considerable surplus of wealth (including all sorts of goods as well as money) over and above what is necessary for immediate consumption. In some way humanity, or at least some parts of it, has got ahead of the game and has stored up enough goods to last it for some time in advance. The difference between riches and poverty may be expressed from this point of view, in terms of difference in the degree in which different people share in this surplus. Our search for the causes of inequality may, for the time being, be narrowed down to the problem of the different ways in which this surplus is shared among different groups.

A municipal swimming pool—part of the public property of the residents of Altoona, Pa. (Courtesy Portland Cement Association.)

Not all of the surplus wealth of society, or of any particular large group such as a nation, is divided up: parts of it are maintained and used in common. We are all familiar with the existence of various kinds of public property to which one person has as good a right as another, and which all people enjoy. For example, the use of public parks and the enjoyment of municipal concerts there in the summer time is not sold for money, but is commonly free to all. Similarly, in the case of public water systems for drinking and fire protection, and in the case of schools, police and military protection, there is at work an enormous amount of wealth which is placed at public disposal with very little discrimination among its users.

At the other extreme we have the type of wealth we call private property—one's personal belongings, clothing, books, jewelry, houses, automobiles, land, money, and securities. The existence of private property is commonly regarded as the foundation of our economic system, but it is important to recognize that little or no property is really private in the sense that its supposed owner has complete power over it. In the ordinary run of activities, of course, he will be undisturbed in his use of these various forms of property and may never feel the restriction, but all the time his use must occur within the limits set by many regulations which he would feel if he should be moved to act in unaccustomed ways. His management of land, houses, and live stock, for example, is, in all crowded communities, subject to close supervision because it may affect the health and the comfort of his neighbors. His property is not private to the extent of permitting him to use it in such a way as to constitute a nuisance to others. Many restrictions are placed upon the sale of property which is ordinarily regarded as private, especially in the case of minors, and for persons regarded as incompetent. In all such cases, government stands ready to step in and direct the transference of property in ways the legislatures deem best. Privacy in property is, then, relative. And there is none of it which can be used absolutely as its nominal owners wish.



Many such tracts as this, forest, lake, and mountain, are part of the "public domain."
(Courtesy West Coast Lumber Trade Extension Bureau.)

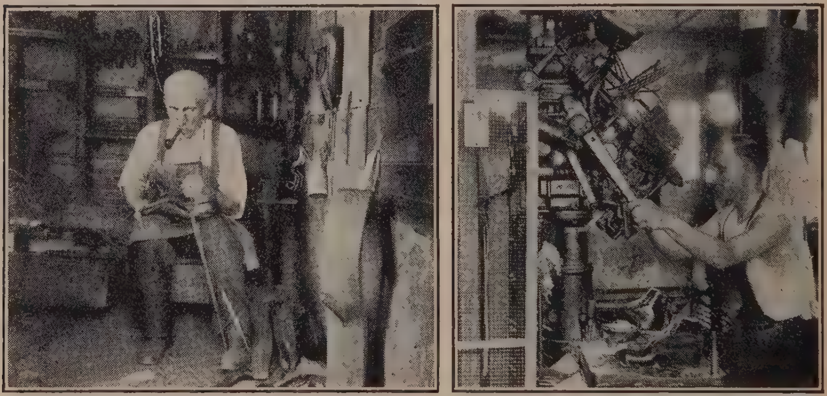
The surplus of goods which society has accumulated should, in other words, not be regarded as something split up into little piles of which each individual owns a separate one, large or small, to do with as he pleases. It is rather to be thought of as a general fund which functions sometimes, at any rate, for the benefit of all without discrimination, and which, without at any time becoming completely divided, also assists in activities for the special benefit of certain groups and individuals. Even the land of a nation is not all divided up into private plots. There are such areas, but there are, in addition, vast government tracts, unclaimed areas and waterways which belong to no individual. Similarly, railroads, factories, and huge corporate enterprises cannot be parceled out separately. They go on as huge impersonal systems, conferring their benefits to some extent on all; but here and there directed with special favorableness toward a few.

In the degree to which a nation's wealth is placed without reserve at public disposal, there is little or no need of competing for a share in it; competition centers about those parts which are most given to private control. We shall have occasion in future chapters to see in more detail how competition goes on and how it is possible to regulate it. Here we need only notice, as a part of our general description of the facts, that income is usually apportioned as a result of the various processes of bargaining which take place in the market places of our society. In addition to winning an income in the competitive struggle, we should also remember, however, that many individuals receive a share of the social wealth as an outright gift in the form of inheritance from an ancestor or a patron who has himself acquired it as a result of some advantage enjoyed in the market. It is a persistently irritating problem to determine, in all the ways of apportionment, what part of one's income is "earned" and what proportion is "unearned," or apportioned on the basis of luck of one sort or another. Judgment is not so easy as might at first be supposed, since many forms of activity which seem to be entirely selfish are not so in reality. Good may come to others through the most self-seeking of acts. Also it is an almost hopelessly complicated question to decide on the comparative value of one's activity to the group. All we need to consider here, however, is that, in our present economic system, incomes are given partly in payment for services and partly for no services at all. One may earn wages as a miner; or he may inherit a million dollars. Between these extremes there are many intermediate ways of receiving income. For example, an individual may work and save up capital, which may then go on earning money for him after he has ceased to work. Or, having been lucky or foresighted enough to buy property in a certain section of a town, one person may be made rich without work through the increase in its value—a very common phenomenon in growing America.

What are the factors which determine who shall win out in this competitive struggle, and how the winnings shall be apportioned? The answer of most prosperous citizens is that inequality of earnings results chiefly from inequality of ability, that in this age of democracy and equal opportunity everybody gets his just deserts. We shall have occasion to see in some detail how this is not altogether true, and in what specific ways an individual's income is determined by circumstances over which he has no control. A good illustration of fortuitous apportionment, to which we shall presently come, is the way in which poverty tends to be cumulative and increasingly difficult to escape from, since it renders the individual and his dependents more and more unfit to cope with the conditions set for economic competition. Riches, also, at least in moderate amounts, tend to have exactly the opposite effect: they make for better health, more leisure and superior training. But leaving aside these questions of ultimate causation, it is at least evident that the quality of one's work, and the rewards he receives for it, depend largely on how he fits into the productive machine of his time.

3. *Our Intricate Productive Mechanism*

The distinctive characteristics of our system of production are its high degree of specialization and the mutual interdependence which exists among individuals and groups with tasks to do, as well as its extensive use of machinery and scientific technique. Every one has heard of these customary arrangements in a general way, but it is by no means sufficiently realized to what extent they are of recent rather than ancient origin. Nor is it sufficiently realized that they are in process of evolution before our eyes, and that the system of the future will surely be very different from the one we live in. To secure a representative picture of the 20th century economy, one should be able to visualize a society in process of becoming subdivided and mechanized; far from completely so, yet hastening toward that end with accelerated rapidity.



The Old Shoemaker. (From *The Epic of Industry*—Malcolm Keir. Used by permission of the author.)

Shoe Machine Operator. (Photo Ewing Galloway, N. Y. Courtesy Endicott Johnson Corp.)

It would be untrue to say that ingenuity is no longer needed. A good deal is required to make and maintain machines. But most of it now is expended on the machines, not on the shoes. Not only are tasks divided now; they are done by mechanical instruments. Workmen need no longer know how to make shoes; they need know only how to operate machines.

Every one is familiar with examples of the allotment of tasks in modern industry. In the making of any product, such as a shoe, instead of one man making the whole shoe, the process is divided into many different steps, to each one of which certain workers devote their entire time. In one part of the factory, men will be doing nothing but cutting out pieces of leather; in another, sewing together two small pieces; in another, putting in eyelets; in still another, dressing and polishing the finished shoe; and so on. In such a process the use of machinery also develops rapidly. For machines do repetitive tasks even better than men. Whether the elements in the subdivided process are men and women, or steel arms and hammers, the principle is the same: that of giving each unit its own minute function in a long series of continuous functions. The two aspects of the process, it is true, have sometimes and to a certain degree developed separately. There have been times when labor was considerably subdivided, as in an old-time army, with little or no use of machinery; and conversely, machines may be used by individuals who are far from being specialized—for example, the housewife who uses a sewing machine once or twice a month. But looking at the matter in the large, the two phases of mechanization—the human and the material—are closely interwoven, and one cannot go very far without the other.

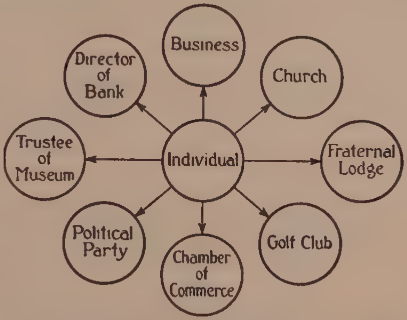
Hogs are sometimes described as "walking corn"; these cattle grazing in a Forest Reserve are quite as properly "walking grass"; they might also be described as "crude leather" or "raw shoes." (Charles J. Belden. Pitchfork, Wyoming.)

In thinking of the uses of machinery in our age, we can also profitably extend the concept to cover the use of applied science. For modern science is itself a crowning illustration of specialization. The principles of chemistry, physics, and mathematics have been worked out only by the determination on the part of many scientists to avoid vague generalities in thinking, and to focus on some one particular problem, such as what happens when water turns into steam. Another man focuses his attention on what happens when water freezes into ice; and still a third experiments with practical uses of the knowledge. So a body of pure and applied science is finally built up which becomes the most precious part of our social heritage. The application of science is scarcely to be distinguished from the uses of machinery, since only the simplest machines can be devised by rule-of-thumb; all of our intricate and powerful metal servants of today require great knowledge and skill for their invention and construction, if not for their operation.

The making of a shoe involves subdivision and interdependence not only within a factory, but also in the general industrial structure. Even geographic regions exhibit the most intimate interdependence. Manufacturers must send to many different places, some of them remote, for raw materials. If an industry makes shoes in Massachusetts, it must arrange for leather from the western plains, or perhaps from Russia or Australia; cotton thread will have come from the southern states; nails and eyelets from mines in Michigan and Pennsylvania; and dyes perhaps from Germany. Many necessary semifinishing operations may be done by other concerns, such as the tanning and dressing of the leather until it becomes fit to be worked. For the bringing of these products to the factory, as well as for the marketing of the finished product, the intricate mechanisms of transportation must be employed —upon many different sea, rail, motor, or air routes. The factory which makes a shoe is itself part of a larger mechanism which includes countless kinds of industries, manufacturing various products and performing various services, scattered over the whole world, which interlock and assist each other, much as do the cogs in a machine.

Social mechanisms are also involved in the manufacturer's handling of his financing. He may need to borrow funds directly from a bank in time of emergency or to enlist some banker's aid in borrowing from the public through an issue of securities. For the collection of his accounts from purchasers, and for payments to his own creditors, he will, if his business is at all a large one, find it necessary to evoke the assistance of credit. The operations of the credit system, he will find, are extended, through international banking arrangements, to the farthest ends of the earth so that countless short cuts and time-saving steps may facilitate the settlement of his debts. Any member of a productive group needs, moreover, to buy and use a great variety of goods and services. For these purposes he must resort, in most cases, to interrelated industrial groups similar to his own. The clothing he wears, the food he eats, the trolley or motor which carries him about town, the newspaper he reads and the entertainments he sees, are all products of industries subdivided internally like his own, and mutually interrelated by a thousand bonds of interchange and coöperation. The social mechanism in which human beings are the units thus shows itself to be infinitely more complex and flexible than any machine of steel, since each individual is a unit in countless groupings. He is not merely a unit in the making of a shoe—he may be a member at the same time of a labor organization, a church, a political party, and a fraternal lodge, all of which exert influences partly industrial as well as partly social. By imagining the many associations in which any one American may be bound up, and the countless industrial organizations upon which he is dependent for his goods and activities, one readily sees how difficult it is to draw a picture of the organization of present economic society in any specific detail. We can only realize that this complexity exists and is changing before our eyes at an ever-accelerated pace. Efficient machines make easier many processes associated with it and leave time and energy free for the acceleration of industry at other points. This social and mechanical complex, together with the physical equipment of metals, chemicals, and other materials used by it, constitute the most important part of the social surplus, far more important in their effect on human living than the gold and land which are commonly thought to constitute riches.

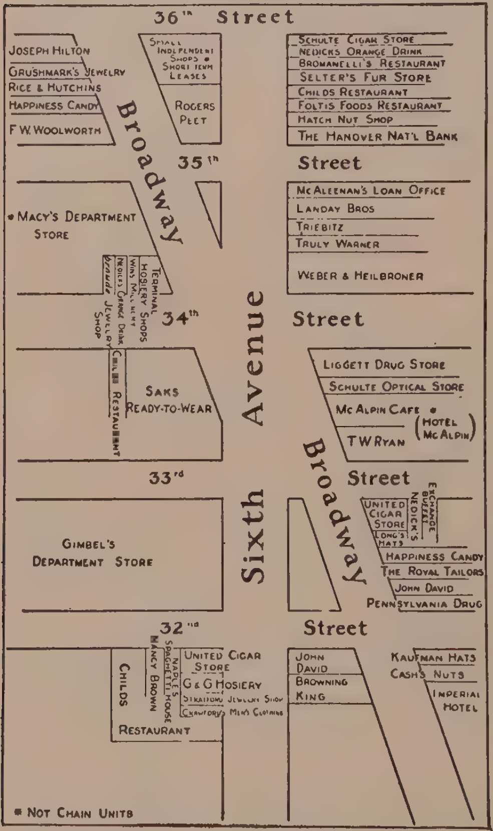
We are able to describe, here, only the larger features of the going system of economic arrangements. But if the student gets from it an idea of its complexity, of the delicate but somewhat haphazard arrangements we have built up for its continuing operation, he will have got about all that can be expected without some specialized study of the detail. We are a society which exists on various levels of life with respect to the goods at our disposal. Some of us are poor, others are well-to-do or rich. We produce goods, we apportion and use them. We attach prices to them and talk about them as being worth certain amounts in our American dollars. Our activities center about pricing activities; none of us are indifferent to the amount of dollars our goods or services will command; and none of us are indifferent to the amount of goods or services we can get with our money incomes. Whether we produce or consume, whether we work or idle, we exist within a price system and are forced to accept the conditions it imposes and the ways of life it makes necessary.



An individual may "belong" to as many groups as are illustrated here. Probably most of us belong to more. Our social responsibilities widen out through small groups to larger ones and it is in this way that we function as members of "society."

4. *The Imperfection of Our Organization*

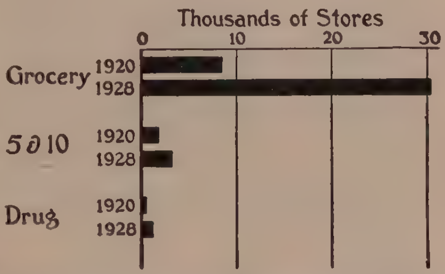
At the same time we are recognizing the intricate organization and mechanization of economic society, we must also notice that this process is not at all so far advanced as we could imagine or wish. Society is not yet wholly subdivided or interdependent, and it is quite as significant to recognize the places in which it is not organized as to see organization already accomplished. In the first place, there are many competing and duplicating enterprises which a perfectly organized machine would not have. The ideal machine contains no mutually frustrating or competing elements—no plurality of parts using up energy to perform in different places tasks which could all be amalgamated. Yet this is exactly what happens when two individuals or firms carry on separate businesses whose work could as well be done by one. Energy devoted to contention and commercial assaults must inevitably involve some loss in spite of the good results it may possibly achieve in the lowering of prices and the stimulation of enterprise.



Herald Square in New York, no less than the corresponding corners of "Main Street" elsewhere, exhibit the taking over of retailing by various chain store systems. Americans have become familiar at home with most of these names.

This fact appears with most obviousness when we see a nation struggling to carry on industries which must be maintained at a social loss, for the purpose of becoming self-sufficient. It is obvious that certain nations are best fitted to carry on certain industries. One such as France, by virtue of craftsmanship, is highly skilled in the making of delicate luxuries such as wines, perfumes, and fine clothing. Yet because it feels it is isolated and in danger of being cut off by war from the possibility of getting goods outside, it devotes a part of its energy to the raising of raw materials and the making of a great range of cruder manufactures which might be done better in some other nation. This is not to say that it would be a good thing for our nation to specialize on a few activities, or that within a country it would be a good thing to abolish duplications and competition. We have learned by experience that vast industrial mechanisms do not always function as successfully as smaller ones. They have been known to become top-heavy and awkward. No nation, group, or individual, moreover, can ever know conclusively just what are its best potentialities for useful work, and it is well never to become completely committed to specialization, since a little effort now may result in the development of some unique and valuable contribution in the future. In a later section we shall examine the international problems which arise from these considerations.

Throughout the industrial world, independent and partly self-sufficient units are rapidly being absorbed into larger combinations. Every year sees new industries pass into large-scale production and combined ownership and management. For example, the field of retail grocery selling is rapidly being organized into large chains of stores, and the highly competitive automobile industry is day by day coming closer to the present condition of the steel industry. Power systems, railways, and other enterprises exhibit the same almost universal tendency. Farmers, alone, are still, on the whole, comparatively independent: they are not as intricately bound up in productive organizations as manufacturers are. But the farmer and his family no longer make all the goods they use. They, too, specialize on a certain range of products. They sell their raw materials through associations for coöperative marketing to the large wholesale dealers of the cities, they borrow and lend with the help of bankers and they buy their clothing, luxuries, and even a large part of their food from the general marketing system. In isolated communities, however, one can find a fairly close approach to the small self-sufficient unit of other days. It is difficult to get manufactured products from outside, and a large variety of products must be grown and manufactured in the immediate neighborhood. Such a community taken by itself may seem like an efficient mechanism, but considered in relation to the outside world, there can be discerned a loss of energy through excessive versatility—that is, each individual does many things poorly rather than a few things well.



Eight years' growth of chain stores in three selected trades. (Data from Federal Reserve Board.)

5. *Freedom and Mechanization*

In reviewing those activities of our society which are not yet fully mechanized, we must take note of the very large extent to which free bargaining goes on among individuals and groups. In the perfect machine, each cog connects with only one or a few definitely chosen other cogs; it does not exercise freedom of choice and float about uncertain with what other part it will connect. The extent to which bargaining is really free at the present time varies in different places and is rapidly changing; but here once more it is at least clear that present conditions are a mean between two possible extremes. The individual buyer has a certain range of choices in buying food or clothing; but combination is rapidly removing the differences among these various alternatives, as prices, products, and selling methods become more standardized. The laborer has, theoretically, freedom to decide for whom he shall work and for what wage, and the employer, likewise, has nominal freedom of contract. But in reality, the freedom of both of these parties is considerably limited, not only by the trade-unions and employers' associations, which dictate terms of contract to their members, but by the conditions of the labor market which exist at the time. Theoretical freedom of decision is limited by the movements of levels of price, which determine to a large degree what any individual can command for his products or labor.

There is still some free face to face bargaining in markets for foodstuffs at wholesale. Here the old rule of "caveat emptor" has a meaning, for buying can be done with confidence in the simple report of the senses. (Courtesy U. S. Department of Agriculture.)

It is easy to imagine a state of economic society which would be much more highly mechanized than our own. Novelists and dramatists in the last few years have drawn many pictures, horrifying as well as hopeful, of the excessive standardization which we seem to be approaching. Without going too far into the blue it is easy to imagine a scientific way of discovering what each individual, community, and nation is best fitted to do, then of training these units to perform their functions narrowly and with the utmost efficiency. One can imagine, at the same time, each of these units given an automatic return for its services; and machinery universally used to replace all present hand processes. The unpleasantness of such a picture suggests the serious problem which confronts us concerning future policy.[1] Some of the greatest delights of present-day life consist in those activities which are not efficiently subdivided: for example in family life where the housewife does not specialize on one task, but performs a variety of them with interest. The fine arts of handicraft, painting, and literature, and all sports and amusements, seem quite incapable of being mechanized beyond a certain point without deterioration.

Foreign critics visiting our shores, or surveying us from across the water, often speak with disapproval of the "Fordization" of America, and of its alarming spread over Europe. They remind us with pride, and with a good deal of truth, that in Europe the old-time spirit of craftsmanship is still alive. In spite of the growth of factories, there is no lack of careful artisans who prefer to do an individual job with painstaking finesse, even against their obvious financial interest, and they find a discriminating public to appreciate and reward them for so doing. Here, one must search a long time, in the back streets of small New England towns, to find the old shoemaker, blacksmith, cabinetmaker, or watch-repairer who regards his work in the 18th century manner. American manufacturers of the better grades of craft work, such as furniture, decoration, clothing, jewelry, and stage scenery, are often forced to rely on foreign-trained workmen for the finer details of designing and execution. Our modern styles in the industrial arts, as in the fine arts, are still too heavily indebted to outside sources, and a strong, genuinely indigenous American movement in any of them is still a dream of the future.

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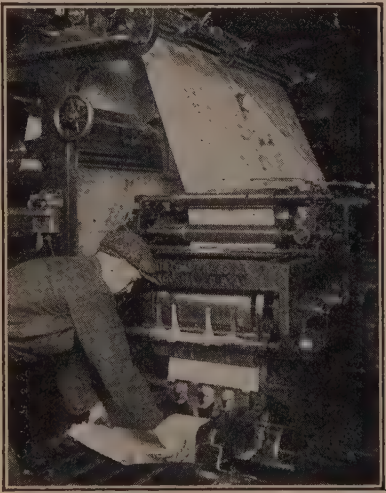
[1] The student is here referred, for a further discussion, to *Men and Machines*, by Stuart Chase, 1929.

But over against these facts, one may fairly credit the American system of mass production with an unprecedented popular diffusion of the basic necessaries for comfort and culture. It is unfair to limit this achievement, as foreign critics often do, to "material comfort" alone. Fresh, wholesome and varied food, well-heated, lighted, ventilated, and furnished buildings to live and work in, adequate clothing and swift transportation, within the reach of great numbers of people—if not yet of all—may perhaps be grouped under that heading with no disparagement of their importance, for they provide a stable physical basis for all intellectual and æsthetic development. But the cheap mass-production of books, newspapers, pictures, phonographs, and radios has a direct cultural importance that should not be minimized. Though still too often employed to diffuse the worst instead of the best in contemporary civilization, and full of danger when made the tools of dishonest propaganda, their value when properly used has been abundantly proven in public education, democratic exchange of opinions, and the discriminating enjoyment of life. Our mechanical inventiveness, together with a large share of our private and public wealth, are being devoted each year with



Mass production of newspapers. The modern press is capable of putting out over 60,000 copies of a 50 page newspaper per hour. How many words in them are worth the printing? (Photo Ewing Galloway, N. Y.)

more intelligence and liberality to the advancement of art, science, and social welfare on a broadly democratic basis. Signs are not lacking that the past century of economic growth will be in America, as it has been elsewhere in the past, the forerunner of a great age of cultural progress.

It is already evident that, in education and the arts, modern society, and America in particular, must fight hard to restrict the universal trend of mechanization to its proper fields, or else lose many of the most precious values of life. But in other fields, such as industry, finance, and commerce, the best and only possible course lies ahead, toward making the economic machine as perfect, complete, and smoothly-working as possible; toward making it man's efficient servant and not his master. In that way, if we can steer judiciously, avoiding the dangers which are only too evidently lurking on every side, lies the possible freedom of humanity from its ancient enemies of drudgery, hunger, ignorance, disease, and war.

6. *Wealth, Happiness, and Achievement*

Much money, as we are often reminded, does not insure genuinely good living. The struggle to possess it is the root of at least a large part of the evils which come upon individuals and nations. One who succeeds in getting it, perhaps after long drudgery, often finds that it will not buy the things he most desires, that it brings its own train of anxieties, and tempts him into wasting time and energy on unrewarding expenditures. On the other hand, a good life is possible with very little material wealth, as we discover from observing the vigorous frontiersman, or the artist in his garret.

These truisms have been preached for centuries, yet most people continue to desire wealth, and to devote the greater part of their efforts to building up fortunes for themselves, their families, and their countries. And there is, of course, a measure of truth in their judgment, as well as in the philosopher's maxim that high thinking goes only with plain living. Wealth, if it is well used, is a powerful instrument for happiness and achievement. Without it happiness and achievement are difficult to attain in modern society. What can be said of it is that those who possess it are freed from drudgery for the highest life of which they are capable. For this reason people are right in considering it a primary concern of life to make more available this material basis for good living. The getting of wealth is only a first step, however, which, for the attainment of real progress, must be considered together with at least two other problems: (1) how this wealth may be secured in ways which are themselves intrinsically valuable as activities; and (2) how it may be used for worth-while ends.

With such problems of economic living as these, we are occupied in the present book. It is important that they be studied from a social point of view, for to an individual the gaining of wealth is apt to seem only a matter of hard work in his chosen field, or perhaps of craftiness in getting money away from others. But opportunities for any individual's achievement, and the limits to it, are made by the social group of which he is a member. The fortunes of all of us are largely bound up together. Therefore it is useful to consider the ways and means by which a social group may improve its economic conditions. The most successful way, for the time being, as we have said, is often to take the wealth of some other group. With these tactics, effective as they may be, we are not so much concerned, though we shall have to deal with them where they affect the wider economic life. We are interested more vitally in the slow and peaceful climbing of modern social groups to higher economic levels, through coöperation and exchange.

7. *Economic Theory and Practice*

This has been the object, directly or indirectly, of most economic study since Adam Smith's *Wealth of Nations* was published in 1776; but there are many different ways of pursuing it. The majority of economists relegate to the background the question of practical improvement, and devote themselves to discovering and analyzing the ways in which economic forces work; how the parts of industrial society fit together and interact; how certain items of wealth are desired and produced; how prices rise and fall; and how a change in one factor, such as paper money, will affect other factors. To some extent, these facts must be discovered before workable schemes of improvement can be mapped out; but the quest for them often leads into meaningless and intricate statistical mazes, or into vague theoretical bypaths which arrive at no practical conclusion. In the meantime, industrial society must function; legislatures and business executives must be deciding policies while the scientists debate.

In spite of uncertainties, enough facts are known to make intelligent decisions possible. There are many obvious needs which are obscured by too much theorizing. We shall not linger long over disputed questions of detail, therefore, but examine the ways and means of economic progress in their broadest outlines, bringing forward what knowledge is available and strictly relevant to practical policy and briefly comparing theories in disputed matters of importance. We shall not hesitate to advance opinions on such matters, in the hope that they will stimulate discussion, rather than end it. Many economic writings have been expressly devoted to practical reform, but of these a large part have advocated sweeping changes in society. They are often valuable as ideals, even when impossible of attainment in the present; and often they have been urged with a passionate intensity which has awakened people to the existence of long-tolerated evils in the social system.

In a final section we shall consider some of the most important of these schemes as they bear upon particular issues. But many of them are impracticable and confusing because they assume an inaccurate foundation in actual facts and in the necessary intermediate steps between the present and Utopia. We shall not attempt the impossible task of outlining a perfect economic order of our own imagining but will rather confine our efforts to dealing with the situation piecemeal, reviewing some of the present conditions which most obviously call for improvement; and some of the suggested methods for improving them.

8. *Difference in Standards*

The first step is to form a fairly specific idea of what needs to be done. For this we do not have to look into any imaginary future, but merely to compare the circumstances of various people at the present time. For some people have already reached what amounts, practically speaking, to an economically perfect situation; they may not use their opportunities properly, but they do at least possess the possibility of happiness and achievement beyond the limits of most people's imagination. What needs to be done, then, is to bring others up as near as possible to this level of opportunity. That the great majority now falls short we all know, but we often fail to realize how much they fall short, and how disastrously the lack of opportunity affects their lives. Before going on to discuss ways and means of improvement, it will therefore be advisable to view the present state of things as clearly as possible; to see what poverty, riches, and moderate comfort actually mean in terms of the quality of living; in other words, to realize the difference between the various economic levels in America today.

9. *Ways of Measuring Standards*

A moment's thought discloses that the words "poverty" and "riches" mean different things at different times and places. What is called "poverty" in New York today might well seem a dream of luxury to the Armenian refugee, and certainly would have seemed so to the serf of medieval Europe. A man is judged to be poor or rich by comparison with the prevailing standards of his group, by the fact that he possesses less or more than is usual there. In a certain group, conditions may be such that little wealth is possessed by individuals, or needed. Thus a nomadic tribe, wandering in a plentiful country with little or no private property, could hardly be judged as poor by the test of money incomes prevailing in New York. To make our terms fairly concrete, then, we shall restrict them to conditions in the United States at the present time. Concerning ways and means of improvement, too, we shall also limit ourselves fairly closely to what is practical here and now, although much of what is said will apply to other times and places as well.

We have already noticed that money alone, or even the value of goods possessed, is often a misleading measure of the standard of living when this phrase is understood in its broader and truer sense. One man may feel himself rich with next to nothing, as Thoreau did in his cottage at Walden. He has enough to suit his simple tastes; and so employs his few possessions as to achieve a high level of culture and happiness. Another may, like Silas

Marner, hoard his wealth and live penuriously. Still another may persist, through sheer force of habit, in grinding toil after he has made his fortune. And many men have achieved their riches only by their own physical and mental ruin.

How wealth is used, then, may prove sometimes to be a more important consideration in producing a really high standard than the amount of wealth possessed; and we shall certainly consider it among the ways of raising the levels of living. But notwithstanding these exceptions, there remains a fairly general correspondence, within the same group, between income and activities, between economic strata and degrees of opportunity for health, culture, and freedom from the fear of want. So we may safely differentiate our standards primarily by the use of a measure in money income. We shall classify people on the basis of their levels of affluence, as indicated by their incomes and expenditures. At the same time we shall examine some of the physical and mental conditions and activities usually associated with these economic levels.

PART II

POVERTY, COMFORT, AND RICHES: PRESENT LEVELS OF LIVING

CHAPTER 5

RURAL POVERTY

1. *Unpleasant Facts*

The lowest level at which people exist we call poverty. Like so many other definitions, this one has to be sufficiently general to allow for changes in content. But what we mean, really, is extreme privation, the lack of command over goods and services, and, usually, forced activities of a mean variety. Poverty means that the preservation of life itself is uncertain; it means that malnutrition and disease are hovering attendants; it means that all the poor energies of the family are pressed into the service of escape from the dilemmas of a continually precarious existence. These miseries are common to the poor alike in country and in city; but they are of somewhat different kinds and arise from certain different causes. So we shall consider as types both the family of a farmer struggling with a stubborn and unwilling soil, and that of a factory worker, forced to exist on an inadequate wage. What do they do, and what things do they do without?

Rural Poverty. (Milbank Memorial Fund. Photo Hine.)

We cannot give precise meaning to the utter destitution of great numbers in the population. The things and the activities available to them do not lend themselves to analysis. Little real work has been done which is helpful as description. But even those farm families which do not live in the most abject poverty are sufficiently badly off if one stops to think of the things they do not have and the things they cannot do. For these there is some available descriptive material. A Department of Agriculture survey of *The Farmers' Standard of Living*,[1] which avoided studying families living in the poorest conditions as well as those in the best, found that average incomes even here amounted to less than sixteen hundred dollars a year ($1,597.50 per family of 4.4 persons). That this is not sufficient for a desirable family life is shown in the analysis of the activities and goods available at that level. It is notable also that forty-three per cent of this income did not come in as cash but came off the farm. All the income was, therefore, counted, whether it came in as money or as goods. Of it, 41.2 per cent went for food, 14.7 per cent for clothing, 12.5 per cent for rent, 13.3 per cent for "operation goods"—fuel, automobile, laundry, telephone, etc.—3.8 per cent for health maintenance, 6.6 for "advancement"—education, reading matter, church, etc.—2.5 per cent for furnishings, and 2.6 per cent for personal goods, with a fraction of a per cent remaining unclassified.

Perhaps a good way to understand just what this life means—and it is not "poverty," either, to the investigators, since they could have found much worse conditions—is to analyze some of these figures. When we say that only 2.6 per cent of the family incomes went for personal goods, we must realize that this means, actually, an annual average expenditure of from $35 to $45 for all the small amenities of life which come under that head: $14.50 for "gifts," $1.20 for "jewelry," $9.40 for "toilet articles, etc.," $4.30 for " candy, sodas, etc.," and $11.60 for " tobacco, pipes, etc." Who is there, more fortunate, who can pass over that "$1.20 for jewelry" without some vision of child's delight in trinkets; or "14.50 for gifts" without the memory of Christmas and birthdays at which this annual total for a whole family would have seemed incredibly small? A family even on this level must devote almost the whole of its income to the utter necessities. What is left for other things is pathetically little. And these are not the poor of the pine-barrens, of the Arkansas "sticks," of the upland south, of the stony hillsides of New England. Yet for "advancement" the average sum which could be commanded was $104.80. And this included, for instance, $37.90 for education and $11.20 for reading matter. On such allowances as these, how can advancement for a whole family be very great? Even the total recreation allowance averaged only $22.50 for the year. Not many but much time spent in being close to nature which makes for health.

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[1] By E. L. Kirkpatrick, Department Bulletin, 1466, U. S. Dept. of Agriculture, 1926. The study covered 2,886 families in 11 states. Cf. also, for fuller treatment, the same author's later book, *The Farmers' Standard of Living*, Century, 1929.

orchestra concerts, not many journeys, not many theaters in this! A few Saturday night movies, a trip or two to the fair. This must be all.

Striking similarities between the percentage expenditures for various kinds of goods among these farm families and those of urban workers, which we shall study presently, appeared in this report as the following table shows:

DISTRIBUTION OF THE AVERAGE VALUE OF GOODS AMONG THE DIFFERENT GROUPS OF GOODS USED PER FAMILY DURING ONE YEAR, BY 2,886 FARM FAMILIES OF SELECTED LOCALITIES IN 11 STATES, IN COMPARISON WITH WORKINGMEN'S FAMILIES STUDIED BY THE FEDERAL BUREAU OF LABOR.

Goods Used	2,886 Farm Families of Selected Localities in 11 States, 1922–1924	12,096 Workingmen's Families in 92 Industrial-Centers, 1918 *
Total value of all goods	$1,597.50	$1,434.40
	Per Cent of Total	
Food, including groceries	41.2	38.2
Clothing	14.7	16.6
Rent	12.5	13.4
Fuel and light	5.3	5.3†
All others	26.3	26.4

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* "Cost of Living in the United States," U. S. Dept. Labor Bureau Labor Statistics, *Monthly Labor Review*, vol. 9, No. 2.

† Not including 295 families for which rent was combined with fuel and light.

Perhaps the most notable feature of this to one who hopes for betterment is the proportion of the incomes devoted to "all others," which includes all the goods not to be rated as absolute necessities. Both groups were able to devote only about one-fourth of their incomes to these purposes. The similarities do not end with this, of course, as can be seen in the above table. The percentages which workers, and farmers too, can devote to each of the main items of a family budget are rather firmly fixed. This suggests something which has been noted for a long time by economists, that this uniformity is persistent. It was first formulated by a German economist and is called, after him, "Engel's law"—meaning that, given a certain income, the uses to which it is put will not vary widely from family to family.

Another table shows how these items of necessity bulk large in the lowest income-groups and how high incomes act as an instrument of freedom. Food for a family at the $600–$899 level is over half the budget. For a family at the $3,000 and over level it comes down to less than one-third. On the contrary, the "all other" item rises from 21.5 per cent to 42 per cent in a similar income-range. Tables showing equivalent contrasts for workingmen's and farmers' families serve to emphasize this same growth of freedom in expenditure as incomes rise:

DISTRIBUTION OF AVERAGE COST OF THE GOODS OF FAMILY-LIVING AMONG THE MOST IMPORTANT GROUPS OF GOODS BY STEPS OF INCREASE IN THE COST OF FAMILY-LIVING OR INCOME; 2,886 FARM FAMILIES OF SELECTED LOCALITIES IN 11 STATES, IN COMPARISON WITH WORKINGMEN'S FAMILIES STUDIED BY THE DEPARTMENT OF LABOR.[2]

2,886 FARM FAMILIES OF SELECTED LOCALITIES IN 11 STATES, 1922–1924

VALUE OF LIVING OR INCOME GROUP	FAMILIES	VALUE OR COST OF FAMILY LIVING			
		Proportion of Total for—			
		Food	Clothing	Rent	All Other
	Number	*Per Cent*	*Per Cent*	*Per Cent*	*Per Cent*
Below $600	58	54.4	11.6	12.5	21.5
$600–$899	280	52.1	11.9	11.6	24.4
$900–$1,199	579	47.6	12.6	13.0	26.8
$1,200–$1,499	614	45.3	13.8	12.7	28.2
$1,500–$1,799	492	43.0	15.1	12.2	29.7
$1,800–$2,099	332	39.8	15.4	13.5	31.3
$2,100–$2,399	196	37.2	15.8	12.6	34.4
$2,400–$2,699	116	36.2	15.5	12.3	36.0
$2,700–$2,999	83	33.6	16.0	13.1	37.3
$3,000 and over	136	30.7	16.4	10.9	42.0
Total	2,886	41.2	14.7	12.5	31.6

12,096 WORKINGMEN'S FAMILIES OF 92 INDUSTRIAL CENTERS, 1918.*

VALUE OF LIVING OR INCOME GROUP	FAMILIES	Food	Clothing	Rent	All Other
Below $900 †	332	44.1	13.2	‡14.5	28.2
$900–$1,199	2,423	42.4	14.5	§13.9	29.1
$1,200–$1,499	3,959	39.6	15.9	‖13.8	30.6
$1,500–$1,799	2,730	37.2	16.7	¶13.5	32.5
$1,800–$2,099	1,594	35.7	17.5	**13.2	33.5
$2,100–$2,499	705	34.6	18.7	††12.1	34.5
$2,500 and over	353	34.9	20.4	‡‡10.6	34.2
Total	12,096	38.2	16.6	§§13.4	31.7

* Cost of Living in the United States, U. S. Dept. Labor, Bureau of Labor Statistics, *Monthly Labor Review*, vol. 9, No. 2.

† Income rather than value or cost of living groups. Average cost of living falls outside of these groups in several instances owing to deficit or surplus reported by a number of families.

‡ Not including 1 family in which rent is combined with fuel and light.

§ Not including 44 families in which rent is combined with fuel and light.

‖ Not including 91 families in which rent is combined with fuel and light.

¶ Not including 78 families in which rent is combined with fuel and light.

** Not including 51 families in which rent is combined with fuel and light.

†† Not including 21 families in which rent is combined with fuel and light.

‡‡ Not including 9 families in which rent is combined with fuel and light.

§§ Not including 295 families in which rent is combined with fuel and light.

It is interesting to note, for our later purposes, that the farmer's work day averaged 11.3 hours, and that that of the housewife averaged 11.4 hours.[3] And we think of the eight-hour day as a fact! It is also interesting that the largest number of farms fell within the group which ran from 75 to 124 acres; also that incomes rose with the size of farms, as did expenditures for "advancement goods." Another table shows this:

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[2] From Bulletin 1466, U. S. Dept. of Agriculture.

[3] From Bulletin 1466, *ibid.*, p. 49. These data were published in 1926. Other data on this point are cited later.

RELATION OF ACRES OPERATED PER FARM TO VALUE PER FAMILY OF GOODS USED DURING ONE YEAR AND TO DISTRIBUTION OF THIS VALUE AMONG PRINCIPAL GROUPS OF GOODS. FARM FAMILIES OF SELECTED LOCALITIES IN 11 STATES, 1922–1924, OWNERS.[4]

ACRES PER FARM	FAMILIES REPORTING	SIZE OF FAMILY	AVERAGE VALUE OF—							
			All goods used			Food	Clothing	Rent	Advancement	All others
			Total	Furnished by farm	Purchased					
	Number	*Persons*								
All.	1,767	4.4	1,703	$725	$978	$678	$253	$225	$124	$423
Less than 25	83	4.5	1,347	578	769	641	217	144	60	285
25–74.	336	3.9	1,382	602	780	594	201	175	79	333
75–124.	506	4.2	1,542	676	866	631	222	212	102	375
125–174. . . .	359	4.6	1,726	743	983	691	259	234	122	420
175–224. . . .	152	4.5	1,882	807	1,075	731	300	249	137	465
225–274. . . .	125	4.7	2,113	1,850	1,263	779	316	273	204	541
275–324. . . .	82	4.3	2,066	807	1,259	742	314	266	200	544
325–424. . . .	57	5.0	2,305	960	1,345	828	333	321	207	616
425–524. . . .	30	4.7	2,290	953	1,337	843	322	275	255	595
525 and over	37	4.7	3,086	1,170	1,916	981	434	408	304	599

That a budget of about $1,600 is not excessive for farm families must be apparent from a study of the items included; but it appears that nothing like even this amount is available, on the average. Following are figures which show the national averages of farm income over a series of years:[5]

AVERAGE REWARD FOR LABOR OF FARMING AND INTEREST ON INVESTMENT, COMPARED WITH AVAILABLE INCOME

YEAR	INCOME AVAILABLE FOR CAPITAL, LABOR, AND MANAGEMENT	"INTEREST ALLOWANCE" ON NET CAPITAL INVESTMENT PER FARM	"REWARD FOR" LABOR AND MANAGEMENT
1919–20	$1,246	$329	$917
1920–21	684	287	397
1921–22	514	244	270
1922–23	682	242	440
1923–24	766	233	533
1924–25	854	230	624
1925–26	879 *	231	648

* This average income is not to be confused with the figure of $1,597.50 cited above as the average income of a selected group. The higher figure was for families judged to be neither indigent nor excessively prosperous.

The farmer's reward for labor and management appears, in 1925–26, to have averaged $648; this sum had to be stretched to meet a needful budget of

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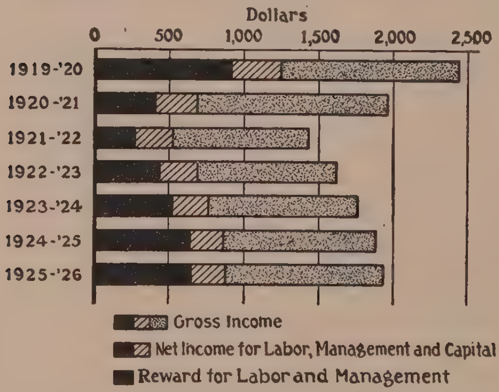
[4] *Ibid.*

[5] From the *Yearbook* of the U. S. Dept. of Agriculture for 1926, pp. 442 ff.

$1,597.50,[6] less than half of what was required. Anyone is at liberty to discover if he can what items of the budget cited could be sufficiently reduced to meet this cut in income. The situation, down to the present, has shown at the most a gain of 20 per cent over this figure. Adding one-fifth to $648 would give a present average income of $778—a liberal estimate.

This is average. Many must have been far below. Apparently all but a small percentage of our farmers are living in conditions now which can only be described as poverty. It would be far from radical to guess that 2 or 3 millions of these families must be destitute or nearly so. These added to some 3 millions of urban families similarly placed, whose situation we shall describe presently, make a formidable problem of poverty. Not less than 5 or 6 millions of our 26 million families must be so situated. This must affect not less than 20 millions of people, about one-sixth of the population.

It is admittedly unfortunate that better quantitative estimates cannot be made. But it would be unwise to carry inferential conclusions further than we have done here. Citation of the figures we have adduced, however, ought to convince any reasonable person that the problem of poverty at present is extremely serious even though it is impossible to say that any certain number of families, exactly, are involved. It must be recalled, however, that, for those urban workers who have managed to keep their industrial employment, wage-rates have not been reduced. Poverty strikes at those families whose main or sole earners are for some reason altogether or intermittently unemployed; and at those rural folk whose land is poor or who, perhaps, have been hard hit by the agricultural depression. If, of these together, there are involved at least one-sixth of the population, at least another sixth, at a very conservative estimate, though not destitute, are very hard up.



This graph pictures the figures included in the table on page 71. Note how farm receipts declined during the depression; also what a small part of gross receipts the farmer can count on as payment for his work.

But no cold analysis in general terms and not even a statistical description can hope to bring home the meaning of poverty to one who has not seen it. It has been the common doom of millions of men; it is the most ancient of tragedies. And as we should expect, literature has always had it for a theme. Modern fiction is no exception and there are to be found in it many vivid pictures of what poverty does to people of every type of character and aspiration, even in the most advanced and prosperous of countries. Dickens' stories of the London slums, though often oversentimentalized, are filled with presentments of conditions which still continue to exist; Dostoevsky, Turgenev, Chekhov, and Gorky make us feel sharply the gaunt misery of the Russian peasant and the hopeless despair of the city slum-dweller. The fact that our own novelists, for the most part, still prefer to ignore misery, rather than to reveal actual life, is not a sign that poverty has disappeared in America. Starvation and suicide from want still occur with significant frequency in our newspaper reports; and investigators provide us with endless statistics on disease and early death from malnutrition and unhealthful work. Those who know the poor, and only they, can really sense the haunting miseries of the long, undramatic struggle to keep large families alive on pitiful incomes. These are unpleasant facts which we do not care to read about or to think of; in fact, it is often supposed to be more patriotic to deny that they exist, or to attribute them to the fault of the poor themselves. So we hear in speeches and newspaper editorials that only the lazy and stupid remain poor in this land of glorious opportunity, or that "the other" political party is responsible for hard times. We turn with relief to more cheerful topics, living in a dream-world of perfection, or obscuring the problem with false explanations, and thus delay real progress toward national prosperity. To compel a thorough realization of the facts, the pen of some new poet, novelist, or reformer is perhaps necessary, but there is much cogency in bald facts as well, and a little imagination suffices to relate them to human experience.

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[6] *Yearbook*, 1926, U. S. Dept. of Agriculture, p. 446. Some farmers, of course, if they owned the invested capital without obligation, also received the interest noted above in the second column, and had incomes of a total size which appears in column 1.

The cartoonist represents one of the occupants of the nearest bench as saying to the other, "I see by the papers that everything is all right." We turn away easily from the consequences of social arrangements which, if faced, would require some drastic change. We like to be told that all is well in a world which happens to favor us. Unfortunately facts are not killed by denials. In the end they must be faced. The ironic artist here cuts deep into our false sentiment of cheerfulness. (© Life Publishing Co., 1930. Used by permission.)

2. *The Trials of Rural Poverty*

For the most part we must depend upon bald facts in such a book as this, but a useful purpose may very well be served by another kind of description. Our writers have not altogether overlooked poverty as a theme, though the instances in which poverty—and especially the poverty of rural life with which we are first concerned here—has formed the background of imaginative literature are remarkably few. Among them no one has pictured more vividly than Mr. Hamlin Garland the trials of rural life with the limited working and living facilities of pioneer times and of the farmer on the poverty level at present. Perhaps there is no more vivid illustration possible than certain passages from one of his great trilogy of books: *Main-Travelled Roads*, *A Son of the Middle Border*, and *A Daughter of the Middle Border*. The following passage is from an early chapter of his *Son of the Middle Border*.[7] It illustrates not only some of the hardships of farm life but the impotence of humans in the grip of the natural forces with which farmers continually have to contend:

> One of my duties, and one that I dreaded, was pumping water for our herd. This was no light job, especially on a stinging windy morning, for the cows, having only dry fodder, required an enormous amount of liquid, and as they could only drink while the water was fresh from the well, some one must work the handle till the last calf had absorbed his fill—and this had to be done when the thermometer was thirty below, just the same as at any other time. . . .
>
> Some farms had ponds or streams to which their flocks were driven for water but this to me was a melancholy winter function, and sometimes as I joined Burt or Cyrus in driving the poor humped and shivering beasts down over the snowy plain to a hole chopped in the ice, and watched them lay their aching teeth to the frigid draught, trying a dozen times to temper their mouths to the chill, I suffered with them. As they streamed along homeward, heavy with their sloshing load, they seemed the personification of a desolate and abused race.
>
> Winter mornings were a time of trial for us all. It required stern military command to get us out of bed before daylight, in a chamber warmed only by the stovepipe, to draw on icy socks and frosty boots and go to the milking of cows and the currying of horses. . . .
>
> It ought not to surprise the reader when I say that my morning toilet was hasty—something less than a "lick and a promise." I couldn't (or didn't) stop to wash my face or comb my hair; such refinements seem useless in an attic bedchamber at five in the morning of a December day—I put them off till breakfast time. Getting up at five A.M. even in June was a hardship, in winter it was a punishment.
>
> Then came the fanning mill. The seed grain had to be fanned up, and that was a dark and dusty "trick" which we did not like anything near as well as we did skating or even piling wood. The hired man turned the mill, I dipped the wheat into the hopper, Franklin held sacks and father scooped the grain in. I don't suppose we gave up many hours to this work, but it seems to me that we spent weeks at it. Probably we took spells at the mill in the midst of the work on the chip pile.

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[7] The Macmillan Company, 1922. Quoted by permission.

Meanwhile, above our heads the wild ducks again pursued their northward flight, and the far honking of the geese fell to our ears from the solemn deeps of the windless night. On the first dry warm ridges the prairie cocks began to boom, and then at last came the day when father's imperious voice rang high in familiar command. "Out with the drags, boys! We start seeding tomorrow."

Again we went forth on the land, this time to wrestle with the tough, unrotted sod of the new breaking, while all around us the larks and plover called and the gray badgers stared with disapproving bitterness from their ravaged hills.

Maledictions on that tough northwest forty! How many times I harrowed and cross-harrowed it I cannot say, but I well remember the maddening persistency with which the masses of hazel roots clogged the teeth of the drag, making it necessary for me to raise the corner of it—a million times a day! This had to be done while the team was in motion, and you can see I did not lack for exercise. It was necessary also to "lap-half" and this requirement made careful driving needful for father could not be fooled. He saw every "balk."

As the ground dried off, the dust arose from under the teeth of the harrow and flew so thickly that my face was not only coated with it but tears of rebellious rage stained my cheeks with comic lines. At such times it seemed unprofitable to be the twelve-year-old son of a western farmer.

One day, just as the early sown wheat was beginning to throw a tinge of green over the brown earth, a tremendous wind arose from the southwest and blew with such devasting fury that the soil, caught up from the field, formed a cloud, hundreds of feet high—a cloud which darkened the sky, turning noon into dusk and sending us all to shelter. All the forenoon this blizzard of loam raged, filling the house with dust, almost smothering the cattle in the stable. Work was impossible, even for the men. The growing grain, its roots exposed to the air, withered and died. Many of the smaller plants were carried bodily away.

As the day wore on father fell into dumb, despairing rage. His rigid face and smoldering eyes, his grim lips, terrified us all. It seemed to him (as to us) that the entire farm was about to take flight, and the bitterest part of the tragic circumstance lay in the reflection that our loss (which was much greater than any of our neighbors') was due to the extra care with which we had pulverized the ground.

"If only I hadn't gone over it that last time," I heard him groan in reference to the "smooch" with which I had crushed all the lumps making every acre friable as a garden. "Look at Woodrings!"

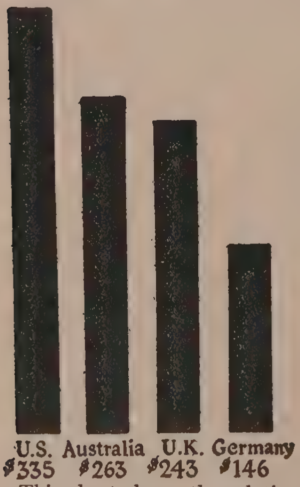
Sure enough. The cloud was thinner over on Woodring's side of the line fence. His rough clods were hardly touched. My father's bitter revolt, his impotent fury appalled me, for it seemed to me (as to him) that nature was, at the moment, an enemy. More than seventy acres of this land had to be resown.

Most authors in writing of "the merry, merry farmer" leave out experiences like this—they omit the mud and the dust and the grime, they forget the army worm, the flies, the heat, as well as the smells and drudgery of the barns. Milking the cows is spoken of in the traditional fashion as a lovely pastoral recreation, when as a matter of fact it is a tedious job. We all hated it. We saw no poetry in it. We hated it in summer when the mosquitoes bit and the cows slashed us with their tails, and we hated it still more in the winter time when they stood in crowded malodorous stalls.

In summer when the flies were particularly savage we had a way of jamming

> our heads into the cows' flanks to prevent them from kicking into the pail, and sometimes we tied their tails to their legs so that they could not lash our ears. Humboldt Bunn tied a heifer's tail to his boot straps once—and regretted it almost instantly.—No, no, it won't do to talk to me of the "sweet breath of kine." I know them too well—and calves are not "the lovely, fawnlike creatures" they are supposed to be. To the boy who is teaching them to drink out of a pail they are nasty brutes—quite unlike fawns. They have a way of filling their nostrils with milk and blowing it all over their nurse. They are greedy, noisy, ill-smelling, and stupid. They look well when running with their mothers in the pasture, but as soon as they are weaned they lose all their charm—for me.
>
> Attendance on swine was less humiliating for the reason that we could keep them at arm's length, but we didn't enjoy that. We liked teaming and pitching hay and harvesting and making fence, and we did not greatly resent plowing or husking corn but we did hate the smell, the filth of the cow-yard. Even hostling had its "outs," especially in spring when the horses were shedding their hair. I never fully enjoyed the taste of equine dandruff, and the eternal smell of manure irked me, especially at the table. . . .

Pessimism can of course be overdone, and there is no harm in reminding oneself that the wealth of the United States as a whole has increased steadily and enormously in recent years; and that by intelligent handling we can increase it even more rapidly.[8] By contrast with nations more heavily burdened by the recent Great War, we may certainly consider ourselves well off. But the millennium is not yet reached. We still have an acute problem of poverty which challenges solution first, of all the problems of life. And the poverty of rural life is quite as striking in its social effects as is the poverty of the cities, though in rural life there are compensations, as we shall see a little later, which are not possible in cities. Mr. Garland wrote primarily of the pioneer conditions that, somewhat modified, are still a feature of many of our farmers' existences. But he was writing of early generations that had not had their best stock drained away into the cities and where the deadly secondary effects of hardship and monotony had not yet been felt. A somewhat different aspect of rural poverty, its later implications of slack intelligence and devastating moral and æsthetic narrowness, are emphasized in a short narrative by Mr. Edmund Wilson[9] of the life of a woman who finally became a shopkeeper in Greenwich Village, New York.



This chart shows the relative wealth per capita in the United States and other countries in 1918. (Based on Bureau of Economic Research statistics.)

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[8] Cf. below, chapters on production.

[9] "The Road to Greenwich Village," *The New Republic*, xlii, p. 216 (April 15, 1925).

I went down to Oklahoma where my father was—my father is a doctor—I don't know if he ever knew how to give anything but calomel but he certainly gave plenty of that—and the whole community down there got to be practically dependent on him—he learned by experimenting on them, too. That was in Eagletown, which is halfway between Broken Bow, Oklahoma, and Dequeen, Arkansas —that's a district they call the Sticks because there's so much timber there. The country is really beautiful, they have all these yellow pines and what they call ironwood that turns first brown and then yellow and sort of a henna-colored soil—but the people don't do anything with it. Where we were, the Choctaw Lumber Company had come in and put them to work—somebody has to do something with them—they'd just set and rock, otherwise. Each family owns a cow and if they're ambitious they have a "hawg" and they'd let it go at that. I tell you, you have to go down and live among them to believe that there are such people! They won't talk—all you can get out of them is "yes" and "no" and "Ah reckon." But they watch everything you do—the first morning I was there all the women hung around and watched me get washed. You ought to have seen their faces when they saw some of the things I did—they thought I was outlandish—they didn't have to do that, see! And when I brushed my teeth! They couldn't make out what it was. They don't have any toothbrushes down there—they use snuff-sticks instead. And the women would watch me from the house across the street when I got undressed at night. The only way they know to amuse themselves is to play craps—that's their diversion. My father had a mechanical piano brought down to try to entertain them and you ought to have seen the crowd around the house every night—they just stood there and stared with their mouths open. They'd never heard any music before—only just these old fiddles they have.

They played it every night for a month and I couldn't stand it any longer finally. I walked out one night and said, "Golly! I can't stand this tinned music any more!" They looked at me real sore and said, "Didja ever hear any better?" Later on, they had pictures there—in the same room that was the school and the church—but most of the older people didn't go—that was kind of new, see. I used to go and see films of New York and it would make me just wild to go there. I got in wrong with them all around in the first place, I didn't make my boy go to church and they're all very moral—or claim to be. And they couldn't understand why I read books—if they saw me reading a book, they'd put me through a regular cross-examination—they'd want to know what it was and why I wanted to read it. They didn't even read the Bible—they figured they wouldn't know about it. I read Darwin and some of Haeckel down there that my father had and *The Wandering Jew*, by Eugene Sue—now I like to read D. H. Lawrence and Michael Arlen. And then another thing I did they didn't like was to speak to niggers I knew in the street—you're not supposed to do that—it's as much as your life is worth to speak to a nigger. I used to go out for long walks with a book and that made them very suspicious—they wanted to know why I wanted to go out for a walk alone.

Anyone who knows the rural life of much of the indefinite border hill country between the North and the South will recognize the picture just drawn as a true one. It is perhaps—even, indeed, probably—overdrawn if it is used as a generalization concerning life lived on the poverty level in rural districts everywhere. But many of its features are true of communities in every part of the country where unfortunate circumstances of soil or climate have kept progress from occurring. In the Jersey pine-barrens, in the hills away from the fertile valleys of New York, Ohio, and Indiana—in many other places too, similarly situated—the same hopeless degradation will be found.

3. *Deprivation and the Struggle for Necessities*

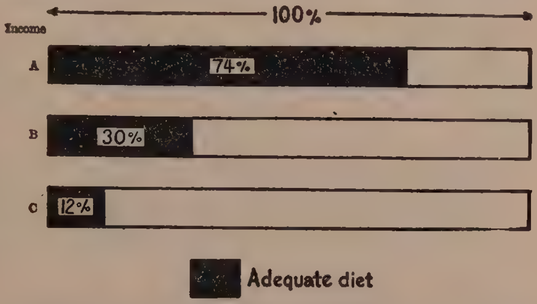
The best way to understand rural poverty is perhaps to imagine in detail what it would mean to man to do without most of the things that make life worth living. What are generally called luxuries are of course unthinkable—theaters, concerts, fine clothes and food, beautiful houses and works of art, travel, and the stimulating contact with minds different from one's own, the chance to discover congenial friends—all the finer developments of the art of living. The poor family in the country is often isolated in a thinly settled region where roads are poor and neighbors few. Because conveyances are expensive, it stays at home. Incessant contact among the same few people breeds monotony, sometimes suppressed hatred; there are consequently no opportunities for sociability, no convivial gatherings of friends and casual acquaintances. If there are neighbors, they carry the same burdens and are limited by the same disabilities in achieving any self-expression. Social contact among neighbors on greatly different financial levels is difficult for obvious reasons. Higher education for the children is practically impossible, for, even though tuition is free and the student might thinkably support himself, the family at home requires every pair of hands from the earliest possible age in its struggle against starvation. Furthermore, the encouragement, the initial contact with better things which might inspire a youth to make superhuman efforts, is usually lacking. Optimists who delight in

An isolated region—where roads are poor and neighbors few.

citing America as a land of equal opportunity, where anyone with energy and brains can rise, forget that poverty tends to destroy these very qualities in childhood, and even to create a weak and diseased constitution from birth.

4. *Unwholesome Food*

For not only the finer developments of life are blighted, but the roots themselves, which are physical and mental health, are almost inevitably destroyed. Food is almost certain to be poor in quality and limited in variety, a few coarse items endlessly repeated. Locally grown foods cannot be supplemented by expensive articles imported from other regions. Refrigeration is difficult at all times in the South, and next to impossible in summer everywhere, which tends to restrict diet to dried, canned, and salted foods which are slow to spoil; and sometimes to the consumption of stale and half-decayed meats. Ignorance prevents proper cooking and wholesome combination, so that starchy and greasy foods, such as potatoes, corn bread, heavy pastry, and the fat and fibrous cuts of beef and pork predominate. Among the very poor even these staples are hard to get, and the diet becomes irregular as well as ill-balanced. Scraps of low nutritive value must be made to go as far as possible, to take the edge off the keenest hunger. The drinking water is often contaminated, and consequently productive of typhoid fever and other dangerous filth diseases.



Inadequate nourishment goes with low income. (From Bureau Publication No. 110, Children's Bureau of U. S. Dept. of Labor.)

As might be expected, investigations of the diet of children in country regions show a direct relation between income and adequacy of diet. We may instance, as an illustration, the figures recently obtained in a Kentucky mountain bluegrass county, of average farming quality. The farms in the county ranged from good to poor, and the families were divided into three income groups for purposes of study. Group A includes those whose ability to provide adequate food, shelter, and clothing could not be doubted; Group B includes those less certainly able to provide for themselves, and Group C those unquestionably poor. Two hundred and fifty-six children, between two and eleven years of age, were examined for indications of inadequate diet. The results are shown in the diagram which appears above.[10]

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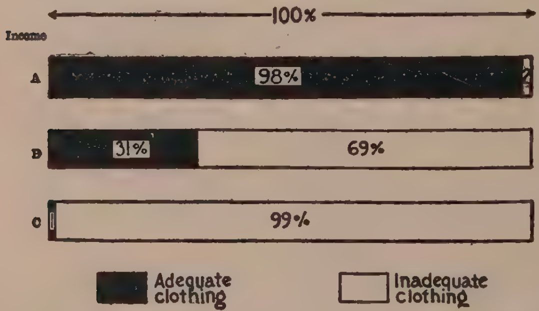
[10] *The Nutrition and Care of Children in a Mountain County of Kentucky.* 1922. Children's Bureau of the U. S. Dept. of Labor. Bureau Publication No. 110, p. 30.

5. *Inadequate Clothing*

Flimsy and insufficient clothing still further saps the vital energy. The woolen coats and furs of the rich, the thick-soled shoes which keep out cold and damp, are out of reach. Shoddy substitutes, worn until they fall to pieces, are the characteristic protection of the poor against the weather to which they are continually exposed. In the report just mentioned, the Kentucky mountain children were found to suffer even more from inadequate clothing than from inadequate food when there existed a shortage in income.[11] This is shown in the diagram below.

6. *Housing Evils*

Houses of the rural poor are characteristically ramshackle and leaky, affording scant protection against winter winds and snows, and against the dampness and malarial insects of summer. In some sections they are pieced together from a few rough boards or logs with many knot-holes and cracks; elsewhere, especially on the western prairies, they are built of sods piled up into walls, or are merely caves dug out in the side of a hill, the openings covered with sods and sticks. If the land about is fairly prosperous and has been settled a few years, one can usually see arising not far from these squalid hovels a self-respecting cottage of smooth and well-matched clapboards, the product of a neighboring sawmill. But the traveler in remote districts of the mountain and prairie regions still finds these marks of progress discouragingly scarce.



Inadequate clothing goes with low income. (From Bureau Publication No. 110, Children's Bureau of U. S. Dept. of Labor.)

Even congestion, darkness, and lack of ventilation, which are usually thought to be evils of the city slum, are prevalent among the rural poor. Scarcity of building materials, inadequacy of heating facilities, and ignorance of the laws of hygiene, induce the family to huddle together in one or two rooms, for cooking, eating, and sleeping. In a government report on a rural county in Montana appear the following typical remarks:

"Small and crowded houses are the rule rather than the exception in the area studied; and this despite the fact that the majority of the people have high standards in regard to housing and sanitation. The scarcity of lumber and the difficulty of getting building materials, the dearth of masons and carpenters, the great distances from railroads and markets, the high cost of transportation, the lack of ready money, and the pioneer attitude that to 'do without' things is a part of the homesteader's lot—these factors combine to explain the small house and the inevitable crowding." [12]

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[11] *Ibid.*, p. 37.

These are the wretched substitutes for buildings used as homes in the section investigated: "In the breaks (land broken up by rivers and creeks) nearly every one lived in a log house. Elsewhere, the prevailing types were divided about evenly among the dugout, the tar-paper shack (a light frame structure covered with tar paper to keep the wind out), the sod house (made by cutting oblong chunks of sod and piling them on top of one another to form the walls), and the gumbo houses (made of the fine gumbo clay so common in the area and much like the adobe houses found farther south).

The typical prairie shack furnishes poor protection against winter cold or summer heat. (Courtesy U. S. Bureau of Reclamation.)

"There were some houses made of stone, which in some instances had been quarried from the buttes on the homestead; and a few frame houses of the type common to the farms of the Middle West—plastered and ceiled inside and probably more comfortable than the other types, though not nearly so attractive in appearance. Often a house would combine several styles—would be part dugout, part sod, and part log; or a combination of stone and dugout; or part sod and part tar-paper shack."

7. *Unsanitary Conditions*

A physique undermined by unwholesome food and weakened by the exposure inevitable wherever clothing is inadequate and housing is poorly provided is not one of great resisting power against disease. But homes where the conditions just described exist are apt to be made still more dangerous by the existence of actual germ-producing conditions nearby. Among the most prevalent evils of this sort in rural communities is the lack of sanitation and drainage. Anything approaching modern plumbing is, of course, unthinkable in remote rural sections, but methods do exist whereby even in a country district sewage can be disposed of adequately and a cleanly environment produced. Investigators in several sections of the country, however, have disclosed the existence of lamentably inadequate sanitary facilities, and a consequent prevalence of many filth diseases.

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[12] Viola L. Paradise, *Maternity Care and the Welfare of Young Children in a Homesteading County in Montana.* Children's Bureau of the U. S. Department of Labor, Bureau Publication 34, p. 61. Cf. also in this connection many other publications of the Bureau such as *Child Labor and the Work of Mothers in the Beet Fields of Colorado and Michigan*, *The Working Children of Boston*, *Child Labor in North Dakota*, *The Welfare of Children in Bituminous Coal Mining Communities in West Virginia*, etc. Also the *Monthly Labor Review* of the Bureau of Labor Statistics, Department of Labor, and the *Labor Legislation Review.*

Raising a family in such surroundings is a difficult business. (Courtesy U. S. Children's Bureau.)

According to a Children's Bureau report on conditions in Georgia: "The general lack of toilets of any kind in the area indicated wide spread ignorance of the essential principles of home sanitation. The rural residents of the mountain county, like those in many districts of the rural South, have not learned the dangers of soil pollution." In Montana also similar conditions were found to exist: "Unfortunately even adequate screening does not insure freedom from flies. Where there are children running into and out of the house, the screen door is only a slight protection. Moreover, when a house is poorly constructed, or in the case of log houses, when the mud chinking falls out, flies enter through the cracks. Some houses, immaculately clean and well screened, were infested with flies. In the homes which were not screened, the flies during the hot summer were a great and constant nuisance. The infrequency of sinks aggravates the fly problem, for many of the women throw the waste water out of their doors. The unscreened homes have other intruders to contend with besides flies. In warm weather, when windows and doors must be kept open, the chickens and pigs avail themselves of the housewife's unwilling hospitality and in spite of much shooing and chasing make themselves quite at home, especially on the sod floors."

To trace the causes of such conditions is itself a problem. One cannot, of course, attribute it always to lack of income, for a very moderate amount of effort properly expended would in many cases correct the situation. There is, of course, in the prairie districts a lack of lumber for building of houses; then too, high winds often sweep them away. In the dryer parts of the country there is a lack of rivers to carry away drainage. But indirectly poverty is the cause of ignorance as well as of lack of time and energy to cope with these conditions. If the farmer had any way of learning the dangers of faulty drainage and of simple methods of constructing cesspools and sewers he might be stimulated to do so. If the insistent demands of farm and housework allowed him time to expend upon problems which do not seem immediately pressing, he might of his own accord discover adequate methods. Meanwhile, the evils exist and are widespread.

Lack of sanitary drainage is one of the prevalent evils in rural communities. (Courtesy Playground and Recreation Association of America.)

8. *Lack of Medical Facilities*

When diseases occur, as they must under such conditions, the family in a secluded region is usually far from any doctor and totally unprepared with adequate medicines or equipment for nursing. Hospitals, of course, are far away. Willing neighbors usually coöperate and do the best they can with homemade remedies, but to call a physician might be out of the question.

In the first place, there is usually an inadequate number of physicians to attend to the population, since the country doctor's life is arduous in the extreme, and he is poorly paid. At the time of a recent survey in Georgia there were only seven physicians in the county studied, to attend to 12,000 people. Thus, each physician was intrusted with the health of about 1,700 persons, as compared with 726 persons per physician for the United States as a whole.

Still more serious are the conditions of travel, which prevent a physician from reaching a family in many cases until it is too late. A family on the poverty level is not apt to send for a physician except in extreme emergencies or when an illness has assumed alarming proportions. It is then necessary, perhaps, to ride or drive for many miles over rough and perhaps impassable roads flooded with rains and melting snows, in order to reach a medical man who may be away on another visit when the messenger arrives. Then the laborious road must be retraced; in the meantime the patient is suffering.

The following story of the difficulty of securing medical attention under such conditions is one of many related to the investigators in Georgia:

"A bad winter storm had set in when a young wife of seventeen, expecting her first baby, realized that the child was about to be born. The father started on horseback for the nearest physician, eight miles distant, and was able to reach his office, but the doctor could not use his car on the roads and feared to attempt a horseback ride over the slippery roads and across creeks jammed with drifting ice. The father returned home alone and found the mother in labor. He then went over a high mountain to secure the services of a very old woman who practiced midwifery. She returned with him through the storm, riding behind him on his horse. Although covering but a few miles, the route led over one of the highest and most difficult ridges of the county.

"When it was found that the doctor, who had promised to come in the morning, had not arrived, a further attempt to secure him was made by the grandfather, who went on muleback. The doctor finally undertook the trip in a buggy but did not arrive at the mountain home until afternoon, seven hours after the baby was born."

The inaccessibility of medical care in confinement cases has been stressed by many observers as one of the most serious difficulties from a social point of view. Even though a country district may be unusually healthy and careful, there is always the certainty that there will be accidents and confinement cases in a certain amount during any year.

Practically all rural investigations reveal the utter inadequacy of medical facilities. In an area of 5,500 square miles in Montana, there was not a single hospital and only three registered physicians. Less than one-third of the mothers lived within ten miles of a physician and more than one-third were twenty miles or more away, ten of these being from fifty to one hundred miles from a physician. As an inevitable result of this lack of medical attention there is a high rate of mortality among mothers especially, but also among all others of the family.

During the five years covered by the Children's Bureau survey there were 628 live births in the district, and eight mothers died from diseases of pregnancy or confinement. In other words, the "cost" in maternal deaths for this number of live-born infants was 12.7 per 1,000. The corresponding ✓ maternal mortality rate for the United States birth registration area in 1915 was 6.6,[13] a rate only about half as high as that of the Montana area studied. And this rate for the United States birth-registration area is higher than the rate of any one of fifteen foreign countries for which the figures for the year 1910 were obtained.

The death rate not only of mothers but of infants shows a noticeable excess in those rural districts where medical care is inadequate. "Preventive medicine has shown that a large proportion of stillbirths and deaths in early infancy can be prevented by providing for the infant and mother adequate care before, during, and after childbirth. Some of the infant deaths in the area could probably have been prevented if the safeguards approved by modern science had been available."

9. *Woman's Work at Home and Afield*

The amount and quality of work done by women in the country varies somewhat in accordance with the traditions of nationalities and other groups. In general, American-born husbands feel a social stigma attached to allowing their wives to do hard labor in the fields. But among immigrant families of European peasants, it is no uncommon sight to see women engaged in practically all the most arduous farm tasks, even to the extent, sometimes, of helping to pull the plow or cultivator. Even though there exists some amount of pride which releases the mother from such strenuous tasks, there is never a lack of work to keep her busy, as the tradition goes, "from sunup to sundown." The sort of work she must do, too, is monotonous and unsystematized, and is of course without any restrictions of hours or any specific wage. It is difficult to measure its amount or its consequences. One needs only to see the rapid change which comes over the face and manner of a country girl within a few years after her marriage, to imagine the life which is implied in the management of a poorly equipped rural home. Rising perhaps before dawn in the bitter cold, she must make fires, attend to part of the farm animals, and get breakfast for a hungry family of laborers. The household tasks alone are sufficient to stoop her shoulders. And her face must cloud with worry at the sight of children who are growing up without the means of health and happiness. Even when her duties are limited to the house, nightfall discovers her unspeakably weary, yet still busy with a hundred petty tasks. But a rural family must be well on the way to prosperity before it can spare a woman entirely from assisting in farm labor during emergencies in the harvesting seasons, so that back-breaking labor in the fields, in addition to all her household tasks, is often the lot of the woman of the rural poverty level.

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[13] Computed from figures for the birth-registration area of 1915, U. S. Bureau of the Census, *Birth Statistics*, 1915, p. 10; and *Mortality Statistics*, 1915, pp. 298–303.

"Marriage and motherhood come early to the mountain girl and large families are the rule. Three-fifths of the mothers included in this [Georgia] study were married before they were twenty years of age. Sixty-one became wives before they were sixteen, and nine before they were fourteen years old. Childbearing at frequent intervals is the rule among mountain women. Of the mothers who were married ten years or more, forty-four per cent have had eight or more pregnancies."

"Man's work lasts from sun to sun; woman's work is never done." (Courtesy *The Survey*.)

Possessing, usually, no means of limiting the size of her family, she must endure frequent childbirth as a part of the inevitable destiny of her sex. Moreover, in spite of the certain expense and difficulty of raising children, the farmer looks forward to the day when a group of sturdy sons will be able to help him dominate the stubborn soil. The bearing and raising of a large family, therefore, is regarded not only as inevitable but as a woman's duty toward her husband. When the children have come, it is she who must find the way to stretch the scanty income of the family for food and clothing, and it is she who must worry most about their future.

"Perhaps no other occupation is so difficult to measure, either in regard to the effort it consumes or to its effect upon women as housework. The number of persons in a household; how many of them help the mother with her work; how many demand care; what hired help a mother can employ; the size and construction of the house; the conveniences and labor-saving devices; the location of the water supply; whether separating, churning, and butter making are among her undertakings—these are a few of the numberless factors in household labor. Indeed, even the weather and the season of the year affect women's work, especially in the country and in such an area as the one studied (Montana) where high winds and dust storms are to be reckoned with; and where in certain months extra tasks, such as cooking for a round-up, for a lambing crew, or for harvest hands are added to a mother's regular housework."

Overwork and heavy lifting were causes frequently given to the investigators in Georgia as causes of permanent injury. Among these tasks were "carrying heavy milk pails," "hanging up meat that was heavy," "lifting tubs of water," "tossing corn on wagon," "carrying water," and "big washings."

For the enduring of such unusual strains, the mother is ill prepared by previous years of unceasing household toil without the labor-saving devices which make such work comparatively a mere pastime to the woman in a city apartment.

"Except for sewing machines, which were found in 322 households, or seven in ten, there was a great dearth of conveniences. Even the families who are fairly well to do have very few labor-saving devices. One mother who lived on an exceptionally good ranch explained that, though she could afford some of the conveniences themselves, the prohibitive cost of their transportation from the railroad placed them beyond her reach. Another family tried to buy a high chair for the baby, but found that the transportation would cost more than the chair itself.

The pardonable pride of Americans in the typical kitchens of modern houses is subject to some reservation so long as such examples as this in a poor farm home remain common. (Courtesy U. S. Department of Agriculture.)

"Two families were supplied with running water, which in one instance was piped into the house from a flowing spring, and in the other pumped in by a windmill, but no other family had running water, though twenty-two had windmills. On twenty-three homesteads there were engines but on five they were used only for farm purposes and not as a help in the housework. Eighteen mothers, however, had the advantage of engines, usually applied to the washing machine or to pumping water for household use. Two hundred and forty-three, or over half the families, had no pump, but were obliged to dip water from a spring or river or draw it from a well, often without the aid of a windlass or pulley.

"Only a few women had sinks, all but 9 out of 463 having to carry their waste water out of the house. This is laborious at any time, but especially so on wash days."[14]

In the rural home one of the most arduous daily tasks is that of carrying water from the spring. It is rare indeed to find a house of the poorer class with water piped inside. Some one must carry it as a rule from a distant source. This work usually comes within the mother's tasks and is recognized as a part of the daily chores. The responsibility of preparing the winter food supply is also hers. Only a few of the most necessary staples are imported from outside. If there is not adequate refrigerating facility, she must cure the meat; and she must gather and preserve fruits and vegetables, and perhaps even make the soap for laundry work. In addition, she must attend to the milking, churning, and poultry-raising, the sewing of clothes, and perhaps even the weaving of cloth.

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[14] *Ibid.*, pp. 55–56.

Whatever crop her husband raises, the woman must be prepared to lend a hand at special seasons when the condition of the crop requires an unusual spurt of labor quickly done. Besides this, it is quite the customary thing for the women of less prosperous families to hire out as laborers on the fields of others during emergency periods. The cotton crop in Texas, for example, demands the labor of women as well as children. In each country covered in a recent investigation [15] more than one-half the white mothers and eighty-five per cent of the negro mothers had done field work at some time during the preceding year. Such work involves many hours away from home, hurriedly prepared meals, and a tax on the mother's strength. Yet the majority of the mothers in this study who did field work had children under six years of age.

10. *Child Labor*

Legal restrictions against child labor in most states hitherto have made special exemptions for agricultural employment, in some cases specifying a certain minimum number of days per year that the child must attend school. There are several reasons for this exemption. In the first place, it would be difficult indeed to enforce an absolute prohibition of agricultural labor for children. It begins at home in the performance of simple, easy chores for the child's own family, and no one would dispute that such work in moderation is beneficial to the child. Yet, there is no way of setting limits to the amount of work that a father shall require of his children and no way of dealing with excessive cruelty in this respect, except by special complaints to boards of health or other authorities. In the country, of course, such individual supervision is next to impossible. There is no way of drawing a line, furthermore, between work done at home and work done on other farms. At emergency periods, such as harvesting and thinning out, it is the universal custom for farmers to aid one another without specific remuneration. From this it is an easy step to engaging in work for pay on a distant farm during the special periods when large numbers of extra laborers are required. To a poor family, a few dollars thus earned by the children are so invaluable that it would be almost impossible to prevent them from sending their children away on such tasks. Many fathers believe that labor of this sort is beneficial to the child, and within limits they are no doubt correct in this belief.

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[15] "The Welfare of Children in Cotton-Growing Areas of Texas," Children's Bureau Publication 134.

But one has only to look at the extreme cases to see that farm labor for children is at present very frequently carried beyond any desirable limits. In the first place, it necessitates absence from school over long periods and consequent retardation; in the second place, when a child of six or seven years is forced to work from dawn to dark with bent back and straining muscles in an open field that is baked by a blazing sun or wet with freezing slush, it is clear that outdoor labor has been carried to a point far beyond that which can, by any effort of the imagination, be called healthful exercise.

Children five to nine years of age, picking cotton in Texas. The sun is hot, hours are long, bags are heavy. The discipline of work like this, it is sometimes argued, is what children need! (Courtesy National Child Labor Committee.)

11. *Farm Work Without Means*

In spite of or because of all these handicaps, the farmer of the lowest level and his family must drudge incessantly to grub a living from some infertile patch of ground, small in size and rejected by other farmers for its inferior quality. It is rocky and worked out in parts of New England, arid or swampy in the poorer districts of the South and in any case ungenerous to a discouraging degree. Farm implements and animals are expensive to buy, and the latter an added burden for food and shelter.

Unless he owns his plot, the farmer must struggle under a heavy mortgage, or, if he is a tenant, pay rent from his precarious returns. If he farms on shares, as many do in the South, he must give over to the landlord perhaps half of the bale of cotton which constitutes his year's produce.

The following account is no doubt too black as a description of farm life in general, but it represents truthfully and vividly one side of the picture:

May an ex-sodbuster wax indignant long enough to inform you that you are misusing the term "farm" [writes Edward Rutherford, Jr.]? Acreage with $60,-

000 improvements, iron fences, bowling alleys, and fountains may be a country estate, a country place or a sylvan or rural paradise—but it isn't a farm. No, sir. A farm, unadorned and unbedecked by a realtor's imagination, is an area of vicious, ill-tempered soil with a not very good house, inadequate barns, makeshift machinery, happenstance stock, tired, overworked men and women—and all the pests and bucolic plagues that nature has evolved.

Its residence is generally wholly unimproved for modern comfort. Often the barn is the best building on the farm, for cows and horses will die and crops spoil when improperly housed much quicker than people do.

A farm is the theater of long, hard, unending labor, that is frequently lost, sometimes to soil that turns sour, sometimes to insect ravages, sometimes to drought or to too much rain. It is the incubator of heartbreaks—a cat that reaches a lightning paw out to crush the mouse every time he believes he is making headway toward freedom. It is the location where an ironical fate gores a farmer to death by the instrumentality of a suddenly ugly bull as he goes of an early summer morning to take a dip in the running brook a quarter of a mile from the house.

It is the site where the same fate crushes him in winter beneath a tree he is felling for firewood to keep his family warm—a tree that suddenly butts back and pins him to earth to freeze as he dies. All its romance is grim romance; the maltreater of animals is kicked to death by a horse, or the sisters who refuse to speak to each other die of loneliness.

A farm is a place where men work their backs into deformity before thirty, overstrain heart and acquire ruptures as boys. It is a place where ugly, brooding monotony, that haunts and taunts day and night, unseats the mind—especially of women. It is stark, grim, lonely, and treacherous—and truly a place of frequent and fatal disasters. A man will slave under the yoke of its spell and not leave it through the characteristic instinct of the human race for bondage. As long as he lives his wife will probably be game and stand by him. But if he dies from required exposure or accident or overwork, do you blame her for going—even to Hollywood? Maybe this accounts for the number of widows' farms for sale.

And, oh, yes. Most farms too struggle always in the shadow of a legal paper that is recorded in the County Clerk's office and that devours the profits—if any—with an amazingly steady appetite.[16]

12. *Compensations*

There is a brighter side to the life of poor people in the country. It is a most degenerate and unusual community that has no social life in which even the poorest may join—church gatherings, dances, and holiday outings. It is an unusually miserable family where the men and boys, at least, do not take an occasional afternoon off for fishing or hunting, where living together is not brightened by some affection and coöperation among the members. Some of the most shiftless and ragged families strike the observer as not unhappy; they lounge about, sing, and enjoy fine weather while it lasts without a thought for the next meal, much less for any of the more remote aims of life. Of course this shiftlessness develops only with the continuance through the generations of extremely difficult situations in the face of which

[16] From a letter to the *New York World*.

puny human struggle seems at last to be of so slight effect as to be scarcely worth while. Among the pioneers—and it must be insisted upon again that pioneering is still very usual even if modern pioneers are only venturers away from valleys into the hills or into new townships, rather than into such wide new regions as were being opened up during the era of the covered wagon which has become an American epic—poverty is not accepted as permanent. People think of themselves as the salt of the earth even though they are poor in the comforts of life. They do not accept strokes from the whip of Fate as they come later to be accepted by the rural poor and by the poor of the cities. For such independent souls the compensations of rural poverty are many. Passages from Mr. Hamlin Garland's *Son of the Middle Border* [17] vividly portray some of them. Here the emphasis is frankly upon the best features, but these ought not to be overlooked in the attempt to understand the whole situation. Mr. Garland is himself not yet ancient and he lived through the experiences of which he writes here:

> Our discomforts had their compensations! As we came back to the house at six, the kitchen was always cheery with the smell of browning flapjacks, sizzling sausages, and steaming coffee, and mother had plenty of hot water on the stove so that in "half a jiffy," with shining faces and sleek hair we sat down to a noble feast. By this time also the eastern sky was gorgeous with light, and two misty "sun dogs" dimly loomed, watching at the gate of the new day. . . .
>
> Our evenings were cheerful. My sister Hattie was able to play a few simple tunes on the melodeon and Cyrus and Eva or Mary Abbie and John occasionally came in to sing. In this my mother often took part. In church her clear soprano rose above all the others like the voice of some serene great bird. Of this gift my father often expressed his open admiration. . . .
>
> There was very little dancing during our second winter but Fred Jewett started a singing school which brought the young folks together once a week. We boys amused ourselves with "Dare Gool" and "Dog and Deer." Cold had little terror for us, provided the air was still. Often we played "Hi Spy" around the barn with the thermometer twenty below zero, and not infrequently we took long walks to visit Burton and other of our boy friends or to borrow something to read. I was always on the trail of a book. . . .
>
> It is impossible that printed matter of any kind should possess for any child of today the enchantment which came to me from a grimy, half-dismembered copy of Scott or Cooper. *The Life of P. T. Barnum,* and Franklin's *Autobiography* we owned, and they were also wellsprings of joy to me. Sometimes I hold with the Lacedæmonians that "hunger is the best sauce" for the mind as well as for the palate. Certainly we made the most of all that came our way.
>
> Naturally the schoolhouse continued to be the center of our interest by day and the scene of our occasional neighborhood recreation by night. In its small way it was our Forum as well as our Academy, and my memories of it are mostly pleasant.
>
> Early one bright winter day Charles Babcock and Albert Button, two of our big boys, suddenly appeared at the schoolhouse door with their best teams hitched to great bobsleds, and amid much shouting and laughter the entire school (including

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[17] The Macmillan Company, 1922. The quotations are used by permission.

the teacher) piled in on the straw which softened the bottom of the box, and away we raced with jangling bells, along the bright winter roads with intent to "surprise" the Burr Oak teacher and his flock.

I particularly enjoyed this expedition, for the Burr Oak School was larger than ours and stood on the edge of a forest and was protected by noble trees. A deep ravine near it furnished a mild form of coasting. The schoolroom had fine new desks with iron legs and the teacher's desk occupied a deep recess at the front. Altogether it possessed something of the dignity of a church. To go there was almost like going to town, for at the corners where the three roads met, four or five houses stood and in one of these was a post office. . . .

Often, thereafter, on a clear night when the thermometer stood twenty below zero, Burton and I would trot away toward the Grove to join in some meeting or to coast with the boys on the banks of the creek. I feel again the iron clutch of my frozen boots. The tippet around my neck is solid ice before my lips. My ears sting. Low-hung, blazing, the stars light the sky, and over the diamond-dusted snow-crust the moonbeams splinter. . . .

From the woodpile I was often permitted to go skating, and Burton was my constant companion in these excursions. However, my joy in his companionship was not unmixed with bitterness, for I deeply envied him the skates which he wore. They were trimmed with brass and their runners came up over his toes in beautiful curves and ended in brass acorns which transfigured their wearer. To own a pair of such skates semed to me the summit of all earthly glory. . . .

Father was always willing to release us from labor at times when the ice was fine, and at night we were free to explore the whole country round about, finding new places for our games. Sometimes the girls joined us, and we built fires on the edges of the swales and played "gool" and a kind of "shinny" till hunger drove us home. . . .

Life was not all currying or muck-raking for Burt or for me. Herding the cows came in to relieve the monotony of farm-work. Wide tracts of unbroken sod still lay open to the north and west, and these were the common grazing grounds for the community. Every farmer kept from twenty-five to a hundred head of cattle and half as many colts, and no sooner did the green begin to show on the fire-blackened sod in April than the winter-worn beasts left the straw-piles under whose lee they had fed during the cold months, and crawled out to nip the first tender spears of grass in the sheltered swales. They were still "free commoners" in the eyes of the law. . . .

In herding the cattle we came to know all the open country round about and found it very beautiful. On the uplands a short, light-green, hairlike grass grew, intermixed with various resinous weeds, while in the lowland feeding grounds luxuriant patches of blue-joint, wild oats, and other tall forage plants waved in the wind. Along the streams and in the "sloos" cat-tails and tiger-lilies nodded above thick mats of wide-bladed marsh grass.—Almost without realizing it, I came to know the character of every weed, every flower, every living thing big enough to be seen from the back of a horse.

Nothing could be more generous, more joyous, than these natural meadows in summer. The flash and ripple and glimmer of the tall sunflowers, the myriad voices of gleeful bobolinks, the chirp and gurgle of red-winged blackbirds swaying on the willows, the meadow-larks piping from grassy bogs, the peep of the prairie chick and the wailing call of plover on the flowery green slopes of the uplands made it all an ecstatic world to me. It was a wide world with a big, big sky which gave alluring hint of the still more glorious unknown wilderness beyond.

Sometimes of a Sunday afternoon, Harriet and I wandered away to the meadows along Dry Run, gathering bouquets of pinks, sweet-williams, tiger-lilies and lady-slippers, thus attaining a vague perception of another and sweeter side of life. The sun flamed across the splendid serial waves of the grasses and the perfumes of a hundred spicy plants rose in the shimmering midday air. At such times the mere joy of living filled our young hearts with wordless satisfaction. . . .

After the planting a fortnight of less strenuous labor came on, a period which had almost the character of a holiday. The wheat needed no cultivation and the corn was not high enough to plow. This was a time for building fence and fixing up things generally. This, too, was the season of the circus. Each year one came along from the east, trailing clouds of glorified dust and filling our minds with the color of romance.

From the time the "advance man" flung his highly colored posters over the fence till the coming of the glorious day we thought of little else. It was India and Arabia and the jungle to us. History and the magic and pomp of chivalry mingled in the parade of the morning, and the crowds, the clanging band, the haughty and alien beauty of the women, the gold-embroidered housings, the stark majesty of the acrobats subdued us into silent worship.

Most of the duties of the farmer's life require the lapse of years to seem beautiful in my eyes, but haying was a season of well-defined charm. In Iowa, summer was at its most exuberant stage of vitality during the last days of June, and it was not strange that the faculties of even the toiling haymaker, dulled and deadened with never ending drudgery, caught something of the superabundant glow and throb of nature's life.

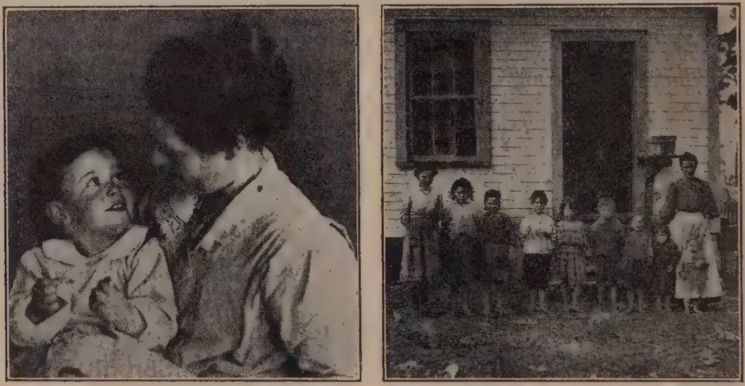
As I write I am back in that marvelous time.—The cornfield, dark-green and sweetly cool, is beginning to ripple in the wind with multitudinous stir of shining, swirling leaf. Waves of dusk and green and gold, circle across the ripening barley, and long leaves upthrust, at intervals, like spears. The trees are in heaviest foliage, insect life is at its height, and the shimmering air is filled with buzzing, dancing forms, and the clover is gay with the sheen of innumerable gauzy wings.

It will be seen from Mr. Garland's description and from the illustration his own life furnishes that battling with Nature under handicaps can be productive of a high degree of family solidarity and individual strength of character. But these are the aspects of the situation which have been, on the whole, magnified and romanticized beyond all reason. The occasional forgetfulness of a holiday does not make up for weeks of grinding monotony, or the idle freedom of a Huckleberry Finn for the sodden brutality of the man he may grow up to be.

12. *Rural Poverty Self-Perpetuating*

The worst aspect of rural poverty as a social problem is not the suffering it entails at any one moment, but the difficulty of escaping from it, the cumulative character of its misfortunes. The little we know of the millions of struggling lives on this level indicates that if the full truth were discovered we should cease comforting ourselves with the fiction that any farmer-boy may rise, as Lincoln did, to fame and fortune. Such spectacular careers do happen occasionally, as a result of exceptional ability or good luck, and it is no doubt inspiring to hold them up as models for all the youth of the country. But their occasional occurrence should not make us believe that the ascent is a possible one for most country people, hard-working and courageous though they may be.

The self-made prosperous farmer of today, though he began without property, had, it is safe to say, the initial advantages of health and opportunity. He probably came from a fresh pioneer family whose vitality had not yet been sapped by years of privation and disease; he worked to the top in a region and at a time when fertile land was waiting in plenty for the first plow.



Poverty self-perpetuating. It can more readily be comprehended when one contrasts these two pictures. Left.—Mother and child of the comfort group. Right.—Widow and her nine children. (Photos Hine.)

Today the rise to agricultural prosperity is often an infinitely harder one. Those whose families have been for years on the land, yet remain poor, have grown up in an atmosphere of discouragement, in a social system already somewhat crystallized and less responsive to individual efforts. Many of them, unlike the old pioneers, begin life with the handicap of poor health, mental and physical, the culmination of three or four generations of sickness and malnutrition. Diseased or feeble-minded strains have for years intermarried, in remote and secluded districts or among the outcast poor; the result is a generation of children doomed from the start to misery.

For the rest, of keener mind, stronger body, and more indomitable will, there is always a chance, but no easy road to success. There are more schools, more railroads, machinery, and scientific knowledge than ever before, but fewer natural resources freely open for exploitation. The way up is now a more humdrum grind; it means drudging for years, perhaps, as a migratory laborer, back and forth from region to region where the crops need special gangs of men, women, and children. Such a worker, unless he drags a family and goods about with him, is deprived of all the benefits of home and civic life. He wanders alone, often out of a job for weeks on end, then exhausted by spurts of grueling labor. The more fortunate may at last find steady jobs, as hired hands, with some established farmer. The next step, as a rule, is to farm some plot of ground for a fixed rental, or "on-shares," giving over a certain percentage of the crop to the owner. This may be a step in advance, or may bring added responsibilities with no material gain. So also the final rise to proprietorship has proved to be a barren victory for many families, when failure after failure of crops has piled a crushing burden of debt upon their shoulders.

Through debt, privation, and discouragement, then, poverty becomes a cumulative evil, one whose burdens grow of their own accord. Destroying, as it does, the very springs of ambition, it makes escape more and more difficult, except through the aid of some outside helping hand.

What can government agencies, scientific knowledge, and private philanthropy do to extend this helping hand? How can they assist the lonely discouraged millions of our mountains and prairies, swamps and deserts, to stand on their own feet, reach a higher level themselves and at the same time provide a more stable basis for national prosperity? That question we shall hold in reserve for later chapters, and proceed now to glance briefly at another phase of American poverty.

CHAPTER 6

URBAN POVERTY

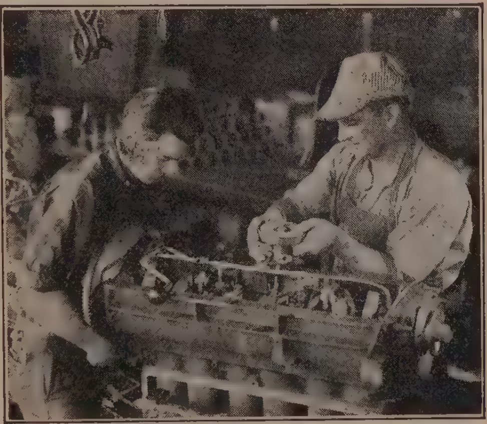
1. *Urban Poverty Likewise Cumulative*

If a young man more unconquerable than the rest succeeds in breaking away from the vicious circle of rural poverty, there is no place for him to turn except to the bottom of the ladder in some town or city. There he must continue the struggle against poverty, with a new set of obstacles. Boys from the country, together with children raised in poverty in the cities, and our ever-flowing stream of immigrants, constantly recruit the army of the urban poor.

Urban poverty under modern conditions, as contrasted with conditions of half a century ago, is often a less desperate situation than rural poverty, though it can seldom have such compensations as were described in the last chapter. The eyes of authorities and philanthropists are nearer, to mitigate something—even if very little—of the conditions that otherwise might become too shocking even for hardened sensibilities. If one is efficient, opportunities to show one's merit and to rise are more numerous in the city. Free or cheap public advantages are available, in near-by schools; inspection of food and sanitation, newspapers, moving pictures, and contacts with other minds exist, however restricted access to them may be. But in return for these, the mine, factory, or inferior office worker must surrender fresh air and sunshine for dark germ-infested streets, the roomy countryside for a crowded corner in a tenement house.

A youthful machine tender in an immense impersonal factory. (Photo Hine.)

Here again the most serious evil, in the long run, is not the misery suffered at any one time, but the difficulty of rising above it. As always, the evil is cumulative; lack of proper food, clothing, and shelter during childhood results in a weakened constitution, and renders the individual unable to compete on the same footing with more fortunate youths. It means that education must be limited. Public schools may be free, so far as books and tuition are concerned. But the student's living expenses must still be paid, except in a frankly charitable institution, and a father bowed with years of struggle may find it impossible to meet them during many years of schooling. If the family is in extreme want, children are called upon while they are still very young to contribute not only to their own support but to that of others, including perhaps one or more incapacitated members. With heavy outside work, schooling rapidly becomes impossible; sickness comes, lessons are undone, and dreams of college scholarships or even the learning of some skilled trade must be reluctantly abandoned. "Working papers" are applied for, and the child begins work as an errand boy, parcel wrapper, or machine tender. He has joined the vast army of unskilled workers in some immense and impersonal system, a factory, mine, railway, or department store, his individuality lost in a crowd, his talents held down to a standardized routine.



(Courtesy Olds Motor Company.)

For the unskilled, there is no escape from one such mechanism except to another of similar character. Many factories too are isolated, especially in mountainous districts, and the worker there is completely cut off from opportunity to change a bad job for a better one. Especially when settled with a family, and lacking a surplus fund to support him in travel and search for work, a man will endure much before cutting loose at the risk of drifting.

A certain proportion of such workers, of course, the exceptionally fit or fortunate, rise entirely out of the masses at the bottom, to skilled work and prosperity. In some of our cities, especially in the South, mine and mill hands are mostly of old American stock; elsewhere the fitter descendants of the old families have risen above the poverty level into the class of skilled workmen, foremen, trained clerks, and managers. Their places at the bottom have been taken by negro labor or by the recent floods of South European immigrants. Of these, in turn, some of the more capable and fortunate are gradually pushed upward to help take charge of more recent cheap labor. The rest remain, bedraggled failures, to help populate the slums along with their newly arrived immigrant neighbors.

Not so now according
Kilpatrick.

Progress does occur, then, indubitably, and it would be false to paint the picture too black. There are meteoric individual careers, and there is a gradual pushing upward of masses of labor by economic expansion. But it is equally false, and a much more current mistake, to take the boastful platitudes of an occasional self-made magnate as representing what any "poor but honest" boy can do if he tries. It is mistaken also, from the standpoint of human happiness, to think entirely in terms of slow economic movements. They are usually imperceptible to the individual, and work too slowly to save his life from failure. Old age, sickness, and death come rapidly, dreams fade, and poverty holds its grip on the next generation with scarcely less bitter tenacity than on the present one.

2. *Low-Grade Urban Work*

The sort of task done by workers of the lowest rank tends itself to keep them there. Unlike the old-time handicrafts, modern industrial methods have very slight educative value for those engaged in them. They too often call for blind obedience and automatic habit, rather than for independent thinking. The mechanical repetition of a single minute step in a process of manufacture, whose relation to other steps may not be comprehended, calls for no powers of construction or organization. It arouses no interest, no joy in labor, leads nowhere; it is deadening to mental growth and to aspiration. Under the best of sanitary conditions, it is fatiguing to nerves and body, since the strain is concentrated on a single set of nerves and muscles, used over and over. The tendency of our mechanical age in general has been to reduce all workers to the task of tending more or less automatic machines.

Operating a punch press requires little skill. Almost any worker can be trained to do it in a relatively short time. The man in the picture is obviously too good for his job. (Photo Hine.)

The young and still ambitious man will of course take time after working hours for self-advancement, studying at night school or by correspondence to improve his general education, or to fit himself for a job higher up. There is always a demand for capable executives in modern industry, and machinery has by no means replaced all the highly paid hand trades. This is the road to advance that thousands are following, and it is often a fairly clear road after one has succeeded in making a start. For the man at the very bottom, though, the necessary strength and rudiments of education may be out of reach, and the hard labor required to keep body and soul together for himself and his family leaves not an ounce of energy over at the end of the day. After ten or twelve, or even after eight, hot and exhausting hours in a steel mill, one is in no condition to go on working at night, but is ready only to drop into bed, or at best to snatch an hour or so of some distracting amusement.

3. *Living Without a Surplus*

Over people of the class which works in mills and shops, living from hand to mouth, there hover always the three dreaded shadows of unemployment, sickness, and old age, poisoning leisure and inducing an agonized frenzy of struggle to get ahead. What legislation and philanthropy are doing to drive back these menaces we shall see in a later chapter. But it may be said here that the task is far from accomplished for the greater number of the poor.

What it means to live without any surplus above immediate needs is difficult to imagine for the comfortable citizen. He rarely has occasion to worry seriously over what would happen in case of a temporary interruption of income; there is a bank account, or a little property to be sold in case of a long illness, or at least some one to borrow from. Old age is far off, and his savings mount up promisingly. But a family which must count each penny to provide the next slender meal is plunged into sharp and genuine distress by any momentary reverse.

Not only does poverty leave one unprotected when such troubles come; it makes these troubles far more frequent and severe than is the normal lot of mankind. Constant fear for tomorrow, in the first place, is a factor contributing to lowered vitality, and thus to the breaking down of resistance. In the second place, each of the three evils mentioned is aggravated by poverty conditions.

Here is a picture of how one family, more fortunate than many, gets along on the margin between subsistence and utter destitution: [1]

> Gladys Caldwell met us at the door of her four-room cottage in the mill village. It was one of a row of dingy cottages out in Poinsett, across the meadows at the edge of Greenville, just beyond "nigger town." I had said to one of the strikers from the Poinsett cotton mill: "I want you to take me to one of your homes where a woman keeps the house going for the wages that most of you are getting. I would like to talk to a woman about washing and doctor bills and milk, and I want to see her house. Don't take me to a widow with five or six starving children: I can find such people in New York. What I want is the story of how you normal, strong people live on your average wages of $12 a week."
>
> Gladys Caldwell invited us in. We sat by a tiny fireplace in her front room, which was also her bedroom. On the walls were a picture of Jesus and a calendar. In the room were a bed, a trunk, and a dresser; in the room opposite were a trunk

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[1] From "How to Live on Forty-six Cents a Day," by Paul Blanshard, in *The Nation*, May 15, 1929.

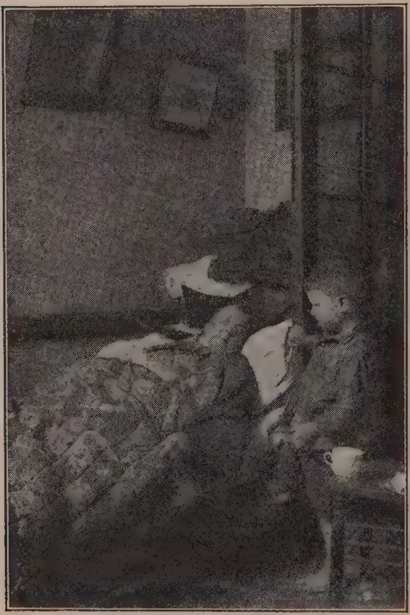
and a bed; in the back corner room was a bed; in the kitchen were a table, a bench, and an oil stove. In the four rooms there were four chairs. The house had no plaster, no rugs, no heating stove. . . .

Here is Gladys Caldwell's story as it found its way into my notes. . . .

Yes, I have a husband and five children. I'm a weaver, at least I work in the weave room fillin' batt'ries. I get paid by the day. No, I don't mind tellin' you about how I live. It's bad enough and we mill folks have stood enough without kickin'.

I get up at four to start breakfast for the children. When you got five young 'uns it takes a while to dress 'em. The oldest is nine and she helps a lot. The others are seven, five, four, and three. What do we have for breakfast? Well, we usually have bread and butter and syrup. No, we don't get any sweet milk. We get a gallon of buttermilk every day from Mrs. Rochester for twenty-five cents. The children like it; they don't take much to sweet milk. They ain't used to it.

After I've got the children dressed and fed I take 'em to the mill nursery, that is three of 'em. Two go to school, but after school they go to the nursery until I get home from the mill. The mill don't charge anythin' to keep the children there. I couldn't afford it anyway. We have breakfast about five, and I spend the rest of the time from five to seven gettin' the children ready and cleanin' up the house. That's about the only time I get to clean up. Ruby washes the dishes. Ruby is nine.



An illustration of what it means to live without surplus above immediate needs. (Photo Hine.)

My husband and I go to the mill at seven. He's a stripper in the cardin' room and gets $12.85 a week, but that's partly because they don't let him work Saturday mornin'. They put this stretch-out system on him shore enough. You know he's runnin' four jobs ever since they put this stretch-out system on him and he ain't gettin' any more than he used to get for one. Where'd they put the other three men?—why they laid 'em off and they give him the same $12.85 he got before.

I work in the weavin' room and I get $1.80 a day. That's $9.95 a week for five and a half days. I work from seven to six with an hour for dinner. I run up and down the alleys all day. No, they ain't no chance to sit down, except once in a long time when my work's caught up, but that's almost never.

At noon I run home and get dinner for the seven of us. The children come home from school and the nursery. We have more to eat at noon. We have beans and baked sweets and bread and butter, and sometimes fat-back (fat bacon) and sometimes pie, if I get time to bake it. Of course I make my own bread.

It takes about $16 a week to feed us. We get nearly all of it at the company store with jay flaps. They are the slips that the company gives you for buying groceries with after you've worked all day. Then you can get your groceries right away and don't have to wait until the end of the week for your pay. If we didn't have 'em some of the people would starve before the end of the week shore enough. I get my butter from Mrs. Rochester. She sells it for fifty cents a pound and we use half a pound every other day.

After dinner I wash the dishes and run back to the mill. We don't have any sink but there's a faucet with runnin' water on the back porch and a regular toilet there, too. You can see we have electric lights, but we don't have any heatin' stove. I cook with an oil stove and we have these two fire-places.

When the whistle blows at six I come home and get supper. Then I put the children to bed. There's a double bed here and a double bed in that other room and a double bed out in the back room. That's for seven of us. The baby's pretty young. I 'spose all of the children 'll go into the mills when they get a bit older. We'll need the money all right. Yes, my father and mother were mill workers, too, and they're still livin' and workin'. He gets $18 a week and my mother gets about $3 a week for workin' mornin's. There was four of us children in the family. My husband's father and mother worked in the mill, too.

We've moved five times since we was married—that's eleven years ago. It don't cost much to move when you move a little way. We ain't been outside of South Carolina. They ain't nothin' in movin' from one mill to another in the long run. When we moved here from Woodside, just over the fields there, it cost us $2.50 a load for the two loads.

I rode around right smart when I was single, but I ain't been on the train more than once a year since. My husband reads a book once in a while but I don't get time. I went through the third grade in school and then I went to work in the mill. I was nine years old when I started work at Number 4 in Pelzer. My husband didn't go to school neither but he managed to pick up readin' and he reads books. Yes, we take a paper.

When supper is over I have a chance to make the children's clothes. Yes, I make 'em all, and all my own clothes, too. I never buy a dress at a store. I haven't no sewin' machine but I borrow the use of one. On Saturday night I wash the children in a big wash-tub and heat the water on the oil stove. Then I do the week's ironin'. I send the washin' to the laundry. I just couldn't do that, too. It costs nearly $2 a week. Our rent in this house is only $1.30 a week for the four rooms and we get water and electric lights free.

I always make a coat last seven or eight years. My husband gets a suit every two years but he ain't had one for the last six years. He got an overcoat about four years ago. Things have been pretty hard. I like the movies but I haven't been to one in about six years now. Not since the children was young.

Maybe my children ought to get away from the mill village, but if they went anywhere they would go back to the farm and there ain't no use doin' that. The farmers haven't got it as good as we have.

I don't get time to go to church. My husband goes to the Methodist church. Most everybody goes to church here. Sunday's about the only day I get to rest any. Seems as if I just have to have a little rest then.

I press my husband's clothes. He half-soles the children's shoes and all our shoes. See those! Those soles on my shoes came from the dime store and cost twenty-five cents for the pair. He puts 'em on with tacks. I make a dress for myself about every six or seven months out of cloth I buy in town. It costs about twenty-five cents a yard.

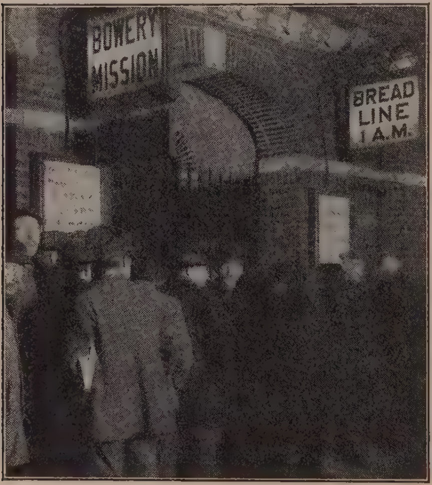
We been lucky about sickness. The children ain't been sick at all for years. When the doctor comes he charges us $2.50 a visit, but right now that the strike is goin' on the doctors is callin' for nothin', and the barbers is cuttin' the men's hair for nothin'. They's pretty much with the strike.

There's one colored doctor over here but he don't come to see anybody. Some of the folks goes to see 'im for sores and such like. They say he's a herb doctor, but as fur as deliverin' babies is concerned I never heard of him deliverin' a white baby. Let's see, my babies cost $25 except the first one and that cost $30. 'Taint every doctor will do it for that. I never had any trouble. I worked up to two months before, mostly, an' I went back when the children was about four months old. The nursery'll take 'em when they're three weeks old. I had to hire a colored girl when the babies come. That cost $7 a week.

Birth control? What's that? . . . Oh! Sure, we'd be glad to have that if it didn't cost no money. Yes, that's my address.

Once I mashed my thumb in the mill. I was out for two months with it and I didn't get anythin'. I went to pull a loom and the handle on the lever slipped because the gear was too tight and it mashed my thumb. The company don't pay anythin' for a thing like that.

Usually I get to bed between ten and eleven at night.



To beg for bread has been the ultimate degradation throughout human history. Men and women will suffer most indignities and survive most shames before they come to this. In an age of surplus the bread line still survives, though shrunk in numbers. (Photo Hine.)

4. *Unemployment*

Loss of his job may be expected at any moment by the unskilled worker. His job is held from day to day, or from hour to hour; he is easily replaceable at a moment's notice by hundreds of others, and is usually laid off without compunction. Without funds to wait or travel, without influential friends, or much knowledge of where work is to be had, he is handicapped in the search for a new position.

The nature of present-day industry is such as to make large-scale unemployment almost inevitable. It is coördinated into great interdependent units, through credit and the subdivision of processes, so that a slowing up of demand at any one point in the system, or the collapse of one unit, is bound to have wide effects. When one firm or industry turns off men, it is likely that others will be doing the same, instead of taking them on. Seasonal fluctuations, periods of heavy demand for labor followed by small demand, occur throughout a whole industry, such as farming or building. Periods of prosperity and hard times are frequently general rather than local.[2] Sometime in the future, perhaps, industry will be so highly coördinated that men not needed at one point can be absorbed immediately somewhere else. But we are now in an intermediate stage between that condition and the old system of small, self-sufficient units.

In addition, also, to seasonal or even cyclical unemployment, there appears to be a growing difficulty which is traceable to the increasing mechanization of industry—the substitution of machines for men. Theoretically the increased product from cheaper machine work ought, when it is sold (turned into money income), and again spent for more goods, to make more than enough jobs for all who are displaced, but there is a hitch somewhere in the process. For even in our prosperous land there seems to be a formidable number of idle, though willing, workers.[3]

There has been no sufficient study of the quantitative phase of unemployment.[4] And we are consequently unable to say exactly how many are unemployed in the United States and so deprived of income. The lowest estimates, however, present formidable figures. Those in the accompanying table are minimum estimates—which means that these are the lowest reasonable figures. The actual numbers may be considerably larger:

YEAR	NONAGRICULTURAL WAGE AND SALARY EARNERS	AVERAGE MINIMUM NUMBER UNEMPLOYED	PERCENTAGE UNEMPLOYED
1920	27,558,000	1,401,000	5.1
1921	27,989,000	4,270,000	15.3
1922	28,505,000	3,441,000	12.1
1923	29,293,000	1,532,000	5.2
1924	30,234,000	2,315,000	7.7
1925	30,941,000	1,775,000	5.7
1926	31,808,000	1,669,000	5.2
1927	32,695,000	2,055,000	6.3

From this it may be seen that at the very least we carry along somehow in our midst from one and a half to 2 millions of unemployed in ordinary times; and that in years of depression these figures may easily rise to more than 4 millions.

It must also be seen for the purpose of our present attempt to assess and somewhat illumine the problem of poverty, that unemployment is of a significance far beyond its surface appearance in statistics. We could throw more light on this if we could say with any definiteness, for instance, how many families are involved in the total or partial loss of income which unemployment involves. If we were to assume that each unemployed person is a male worker with a family of five all of whom depend upon his earnings for support we should know that we were dealing with poverty in its direct and most unmitigated form for from seven to ten millions of people in ordinary times and up to more than twenty millions in times of depression. But we know that only about eighty per cent of those whom the census labels as "gainfully employed" are males; and we know that only about eighty-five per cent of these are married men with families. This reduces the size of the poverty group which is directly traceable to unemployment. Also there are ways of adding to family income which do not reach the statistical tables.* Odd jobs, the smallest of business dealings, may add something to the family treasury. The father may contribute in this way when he has no regular work; but so may the mother or the children. There are ways, devious and humiliating though they may be, in which getting along can be contrived.[5]

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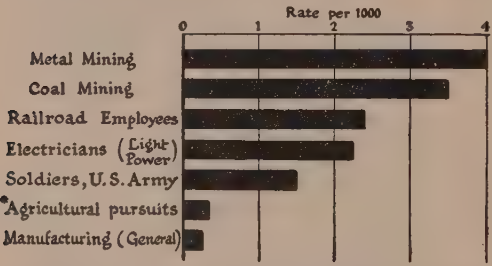
[2] Cf. also later discussions of the rhythm of prosperity and depression and its relation to unemployment.

[3] Mr. W. C. Mitchell discusses this situation briefly in *Recent Economic Changes in the United States* at p. 876 ff.

[4] The student who is interested in unemployment as a separate problem is referred to *Employment, Hours, and Earnings in Prosperity and Depression* and *Business Cycles and Unemployment.* Both are publications of the National Bureau of Economic Research.

But we have liked to think that Americans are not forced to these back-alley subterfuges; we have liked to think that access to the good things of life is not closed to any considerable number of the deserving. How thin the basis is for our belief can be judged from even the unsatisfactory estimates we are able to make in a quantitative way. Taking even the smallest estimate which is able to be made from the scattering certainties of the situation we have more reason for shame than for pride.



Estimate of fatal industrial accident rates in the United States in 1913. (Based on estimates of Hoffman, U. S. Bureau of Labor Statistics.)

* Includes forestry and animal husbandry.

5. *Illness, Accidents, and High Death Rates*

Loss of health is also especially prevalent on the poverty level, partly because of faulty nourishment and bodily care. If a man might come home, after a grueling day's work, to quiet rest, a good dinner, and a night's sleep in well ventilated rooms, he might hope to get into condition for another day of labor. But the low-grade city laborer, coming home to the slums or squalid cottages which surround the mill, enters another dreary atmosphere, dangerous to physical health and deadening to mental growth. Large families crowded for sleeping into the same room readily contract tuberculosis and other contagions. When the mother and older children have jobs away from home there is scant incentive left for careful scrubbing and cooking at the end of a hard day. Even the little available money may be spent, through ignorance, for unwholesome articles, wrongly combined for nourishment.

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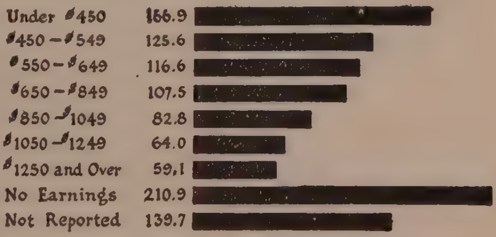
[5] But we shall presently refer to an investigation which showed that for the lowest income groups the father of the family contributed almost the whole of the family income. If this can be taken as generally true it is almost impossible to say how the very poor manage to live at all. Many people have wondered at this. Some social philosophers have commented sadly that the poor must have secrets no one has ever penetrated.

Significant relations between low wages and sickness were found in 1916 by the United States Public Health Service in seven South Carolina mill villages. In different income groups, the number of cases of disabling sickness, and the rates per 1,000 persons, were as follows:[6]

Family Income		Number of Persons Considered	Sick Persons (Disabled)	
Half-Month per Adult Male	Yearly Basis per Family of Five		Number	Rate per 1000 Persons Considered
Less than $6	$460	1312	92	70.1
$6–$7.99	$460–$615	1038	50	48.2
$8–$9.99	$615–$765	784	27	34.4
$10 and over	Over $765	1027	19	18.5
All incomes	....	4161	188	45.2

Studies of infant mortality made by the Children's Bureau of the United States Department of Labor in various cities indicate a consistent relationship between family income and the death rate for children. Those of poor parents had a death rate from two to nearly seven times as great as those of families on the comfort level. Infant mortality was highest where room-crowding and other housing evils existed; it was also much higher among the children of wage-earning mothers than among those whose mothers were not gainfully employed.



Infant mortality rate according to fathers' earnings. Rate based upon deaths of infants under one year of age per 1000 live births. The death rates are higher among families with the lower incomes. (Based on statistics from Children's Bureau, U. S. Dept. of Labor.)

Among working men and women, high rates of illness and accident are directly traceable, not only to undernourishment and lack of proper bodily care, but to the nature of the work done. Some progress is now being made by sanitary rules in places of work, enforcement of protective devices on machinery, and prohibition of unnecessarily dangerous chemicals, but these safeguards are not at all universal or adequate.

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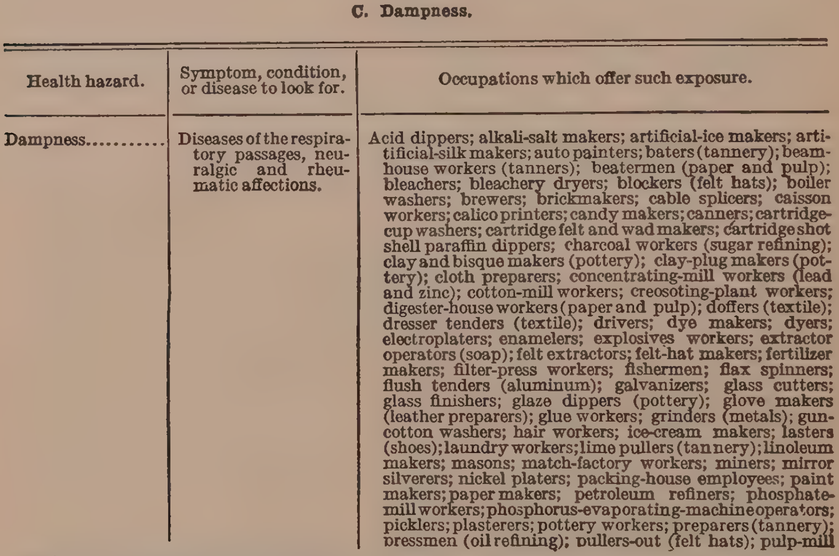
[6] *U. S. Public Health Reports*, 1918, XXXIII, No. 47, 2038–51.

Manual labor in modern industry is inevitably dangerous. In mining, poisonous gases and collapses of rock are of frequent occurrence, and diseases are induced by darkness, extreme heat or cold, and dampness. Factories have machinery which must be oiled and tended, where a moment's carelessness means the loss of life or limb. According to the nature of the product, the atmosphere may be full of noxious vapors, flying particles of metal filings, stone dust, or cotton lint, which enter the lungs and contribute to the development of tuberculosis. Building of skyscrapers and blasting of tunnels cannot go on without the definite expectation of a casualty list more or less heavy. Thus the wife or mother must live in daily dread of seeing a maimed or shattered body brought home to her instead of the man who left home in the morning.



C. Dampness.

Health hazard.	Symptom, condition, or disease to look for.	Occupations which offer such exposure.
Dampness..........	Diseases of the respiratory passages, neuralgic and rheumatic affections.	Acid dippers; alkali-salt makers; artificial-ice makers; artificial-silk makers; auto painters; baters (tannery); beamhouse workers (tanners); beatermen (paper and pulp); bleachers; bleachery dryers; blockers (felt hats); boiler washers; brewers; brickmakers; cable splicers; caisson workers; calico printers; candy makers; canners; cartridge-cup washers; cartridge felt and wad makers; cartridge shot shell paraffin dippers; charcoal workers (sugar refining); clay and bisque makers (pottery); clay-plug makers (pottery); cloth preparers; concentrating-mill workers (lead and zinc); cotton-mill workers; creosoting-plant workers; digester-house workers (paper and pulp); doffers (textile); dresser tenders (textile); drivers; dye makers; dyers; electroplaters; enamelers; explosives workers; extractor operators (soap); felt extractors; felt-hat makers; fertilizer makers; filter-press workers; fishermen; flax spinners; flush tenders (aluminum); galvanizers; glass cutters; glass finishers; glaze dippers (pottery); glove makers (leather preparers); glue workers; grinders (metals); guncotton washers; hair workers; ice-cream makers; lasters (shoes); laundry workers; lime pullers (tannery); linoleum makers; masons; match-factory workers; miners; mirror silverers; nickel platers; packing-house employees; paint makers; paper makers; petroleum refiners; phosphate-mill workers; phosphorus-evaporating-machine operators; picklers; plasterers; pottery workers; preparers (tannery); pressmen (oil refining); pullers-out (felt hats); pulp-mill

This sample page from a bulletin on occupational hazards shows about three-fourths of the jobs which were listed as dangerous because of dampness alone. (From Bureau of Labor Statistics, *Bulletin 506*, p. 14.)

These conditions, and above all the extreme fatigue of heavy labor, make the workingman old before his normal three score and ten. In several industries, a man must expect to be "used up" and comparatively helpless at the age of forty or forty-five. His wife or children must then assume the burden. This wearing out at an early age may or may not have direct influence on the serious problem of employment after the age of 40. It appears to be something of a fixed policy in many industries to lay off men of middle age and not to hire them again when younger workers can be found. Taken together with the general tendency to lengthen the average term of adult life, this habit has social consequences of great importance. Most men of forty are still useful for something, even if not for strenuous and exacting tasks; at such an age, also, they still have dependents.

6. *Women and Children in Urban Industry*

One of the results of machinery has been to take women and children out of the home and put them to work beside the men. Special strength or skill no longer being required in a large part of the industrial process, there is demand for cheaper labor. Men are discarded in favor of boys, girls, and untrained women. School work suffers, tender bodies are stunted and emaciated. Women of depleted vitality cannot bear healthy children, or care properly for those they have brought into the world.

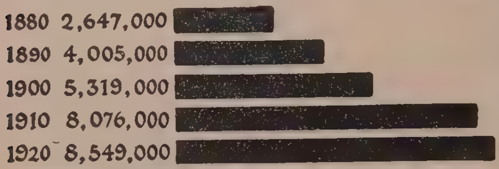
WELL-THE OLD PLANT DON'T OWE ME ONE CENT! I'VE CHARGED IT TO DEPRECIATION — I'LL PUT IN A NEW-UP TO DATE PLANT! NOW OLD JOHN — ?
PLANT REPORT
Mr Owner
OFFICE
WELL BOSS AFTER 40 YEARS OF SERVICE IT'S WORN OUT! -IT'S DONE!-
?
JOHN
-Goody-

Inventory. (Courtesy *Journal of Electrical Workers and Operators.*)

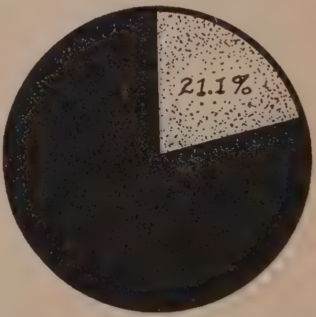
In the enlightened age we are prone to suppose that no employer would stoop to exploit the weak and helpless, or that humanitarian legislation is adequate to prevent one who would. But child labor legislation is still being thwarted on a hundred plausible excuses; the consciences of employers are easily soothed, especially when the women and children themselves, driven by want, clamor for work. Meanwhile, the employment of such labor is on the increase in America, as the accompanying chart will indicate.

According to the 1920 census, more than 1,000,000 children of the United States are working, of whom 400,000 are in agricultural employment. Already, reports from thirty-nine cities show an increase since then of 20 per cent in child labor and nine cities report an increase of 50 per cent.

State and federal laws have been of some effect, as is shown by the fact that between 1910 and 1920 child labor was materially decreased. But, as we have already said, there were in 1920 still 1,060,858 children between ten and fifteen gainfully employed, one-twelfth of all those in the country in this age group. Nearly 400,000 of these were not yet thirteen, and the census does not report those under ten; investigations have revealed many child workers of eight and nine. Moreover as we have also implied, a new and startling increase in child labor is beginning. Figures given out by the Children's Bureau in August, 1923, are as follows: 1922 compared with 1921 (*a*) twenty out of thirty-one cities reporting to the Bureau showed increase in work permits issued and (*b*) five of these, increases of over 100%; 1922, first half, compared with 1921, first half, for twenty-one cities furnishing monthly figures, 18% increase; 1922, second half, compared with 1921, second half, for the twenty-one cities, 43% increase; 1923, first half, compared with 1922, first half, eleven cities, namely, Baltimore, Bridgeport, Hartford, Jersey City, Manchester, New Haven, Paterson, St. Louis, Waterbury, Newark, and New Britain, report combined increase of 57%.[7] This, then is the extent to which we allow the weak and helpless to be exploited, to the inevitable weakening, too, of the national strength of the future.



Number of women gainfully employed in the United States, 1880–1920. (Based on National Industrial Conference Board estimates.)



21.1 per cent of the women and girls in the United States, ten years old and over, were gainfully employed in 1920. (Based on N. I. C. B. estimates.)

What this actually means in the way of life that is implied is again a matter which needs imaginative enlightenment. A passage from Mr. Theodore Dreiser's *The Color of a Great City*,[8] describing a "Christmas Eve in the Tenements," paints the picture which figures refuse to develop:

> . . . They are infatuated with the rush and roar of a great metropolis. They are fascinated by the illusion of pleasure. Broadway, Fifth Avenue, the mansions, the lights, the beauty. A fever of living is in their blood. An unnatural hunger and thirst for excitement is burning them up. For this they labor. For this they

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[7] Cf. also a later discussion of child-labor legislation.

[8] Pp. 275–283. Used by permission.

endure a hard, unnatural existence. For this they crowd themselves in stifling, inhuman quarters, and for this they die. . . .

There is one region, however, where, in the terrific drag of the struggle for existence, the softer phases of this halcyon mood are at first glance obscure. It is a region of tall tenements and narrow streets where, crowded into an area of a few square miles, live and labor a million and a half of people. It is the old-time tenement area, leading almost unbrokenly north from Franklin Square to Fourteenth Street. Here, during these late December evenings, the holiday atmosphere is beginning to make itself felt. It is a region of narrow streets with tall five-story, even seven-story, tenements lining either side of the way and running thick as a river with a busy and toilsome throng.

The ways are already lined with carts of special Christmas goods, such as toys, candies, Christmas tree ornaments, feathers, ribbons, jewelry, purses, fruit, and in a few wagons small Christmas greens such as holly and hemlock wreaths, crosses of fir, balsam, tamarack pine, and sprigs of mistletoe. Work has not stopped in the factories or stores, and yet these streets are literally packed with people, of all ages, sizes and nationalities, and the buying is lively. . . .

. . . Cheap, unsalable, stale, adulterated—these are the words that should be stamped on every bottle, basket, and barrel that is here being scrambled over. And yet the purchasers would not be benefited any thereby. They must buy what they can afford. What they can afford is this.

The street, with its mass of life, lingers in this condition until six o'clock, when the great shops and factories turn loose their horde of workers. Then into the glare of these electric-lighted streets the army of shop girls and boys begins to pour. Here is a spectacle interesting and provocative of thought at all seasons, but trebly so on this particular evening. It is a shabby throng at best, commonplace in garb and physical appearance, but rich in the qualities of youth and enthusiasm, than which the world holds nothing more valuable.

Youth in all the glory of its illusions and its ambitions. Youth, in whom the cold insistence of life's physical limitations and the law have not as yet worked any permanent depression. Thousands are hurrying in every direction. The street cars which ply this area are packed as only the New York street-car companies can pack their patrons, and that in cold, old, dirty, and even vile cars. There are girls with black hair, and girls with brown. Some have even white teeth, some shapely figures, some a touch of that persuasive charm which is indicated by the flash of an eye. There are poor dresses, poor taste, and poor manners mingled with good dresses, good taste, and good manners. In the glow of the many lights and shadows of the evening they are hurrying away, with that lightness of spirit and movement which is the evidence of a long strain of labor suddenly relaxed. . . .

And the homes to which they are hurrying, the places which are dignified by that title, but which here should have another name! Thousands upon thousands of them are turning into entryways, the gloom or dirtiness or poverty of which should bar them from the steps of any human being. Up the dark stairways they are pouring into tier upon tier of human hives, in some instances not less than seven stories high and, of course, without an elevator, and by grimy landings they are sorted out and at last distributed each into his own cranny. Small, dark one-, two-, and three-room apartments, where yet on this Christmas evening, one, and sometimes three, four, and five are still at work sewing pants, making flowers, curling feathers, or doing any other of a hundred tenement tasks to help out the income supplied by the one or two who work out. Miserable one- and two-room spaces where ignorance and poverty and sickness, rather than greed or immorality, have made veritable pens out of what would ordinarily be bad enough. Many hundreds or thousands of others there are where thrift and shrewdness are making the best of very unfortunate conditions, and a hundred or two where actual abundance prevails. These are the homes. Let us enter.

Zorg is a Bohemian, and has a little two-room apartment. The windows of the only one which has windows look into Elizabeth Street. It is a dingy apartment, unswept and unwhitewashed at present, where on this hearty Christmas Eve, himself, his wife, his wife's mother, and his little twelve-year-old son are laboring at a fair-sized deal table curling feathers. The latter is a simple task, once you understand it, dull, tedious, unprofitable. It consists in taking a feather in one hand, a knife in the other, and drawing the fronds quickly over the knife's edge. This gives them a very sprightly curl and can be administered, if the worker be an expert, by a single movement of the hand.

It is in such a family as this that the merry Christmas time comes with a peculiar emphasis, and although the conditions may be discouraging, the efforts to meet it are almost always commensurate with the means.

However, on this Christmas Eve it has been deemed a duty to have some diversion, and so, although the round of weary labor may not be thus easily relaxed, the wife has been deputed to do the Christmas shopping and has gone forth into the crowded East Side street, from which she has returned with a meat bone, a cut from a butcher's at twelve cents a pound, green pickles, three turnips, a carrot, a half-dozen small candles, and two or three toys, which, together with a small three-foot branch of hemlock, purchased earlier in the day, complete the Christmas preparation for the morrow. Arba, the youngest, although like the others she will work until ten this Christmas Eve, is to have a pair of new shoes; Zicka, the next older, a belt for her dress. Mrs. Zorg, although she may not suspect, will receive a new market basket with a lid on it. Zorg—grim, silent, weary of soul and body—is to have a new fifteen-cent tie. There will be a tree, a small sprig of a tree, upon which will hang colored glass or paste balls of red and blue and green, with threads of popcorn and sprays of flitter-gold, all saved from the years before. In the light of early dawn tomorrow the youngest of the children will dance about these, and the richness of their beauty will be enjoyed as if they had not been so presented for the seventh and eighth time.

Thus it runs, mostly, throughout the entire region on this joyous occasion, a wealth of feeling and desire expressing itself through the thinnest and most meager material forms. About the shops and stores where the windows are filled with cheap displays of all that is considered luxury, are hosts of other children scarcely so satisfactorily supplied, peering earnestly into the world of make-believe and illusion, the wonder of it not yet eradicated from their unsophisticated hearts. Joy, joy—not a tithe of all that is represented by the expenditures of the wealthy, but only such as may be encompassed in a paper puffball or a tinsel fish, is here sought for and dreamed over, an earnest, child-heart-longing which may never again be gratified if not now. Horses, wagons, fire engines, dolls—these are what the thousands upon thousands of children whose faces are pressed closely against the commonplace window panes are dreaming about, and the longing that is thereby expressed is the strongest evidence of the indissoluble link which binds these weakest and most wretched elements of society to the best and most successful.

7. *The Problem of Measuring Poverty*

The first step toward remedying an evil is to discover as clearly as possible its nature and extent. Every one knows, in general, that conditions such as have been described in this chapter exist, though perhaps few have taken the trouble to imagine what they would mean in concrete detail. But the usual answer of the well-to-do and complacent citizen is that poverty of the worst sort is rapidly disappearing, in fact is largely a thing of the past, since the war brought high wages, and since the unions have grown powerful enough to grab the lion's share of the nation's wealth. There is, as usual in such assertions, a fraction of truth in this answer. Wages did rise for some workmen, for a while; some unions, here and there, were able to demand more than their share; wholesale starvation such as happens in the Far East and in Russia is no longer possible in this country, and there is a steady rise in per-capita income. But it is false to imagine that the task of abolishing poverty is accomplished when it is little more than begun. The despair and misery of utter destitution are still a terrible reality to millions of American people. Hundreds of thousands of women and children are forced to work beyond the limits of their normal strength every day—to say nothing of the conditions of work of men which are often admittedly bad. It is unjust to these, as well as unpatriotic to the nation as a whole, to form a too rosy picture of national prosperity, since it prevents active efforts to abolish the evil that poverty is. If there is any cogency in figures, it will be well to inquire to what extent poverty exists in America today. In the preceding chapter we undertook this inquiry in a rough preliminary way. We were there considering rural poverty particularly but were led to generalize about poverty as a whole. We must now attempt some refinement of definition which will give more precision to the discussion.

Despair—an unrecognized by-product of industry. (Photo Hine.)

Indefinite as the answer must be, statistical investigations of the last few years have cast considerable light upon it. The question has two parts:

what constitutes a poverty level, and how many people are on that level? The notion of poverty, comfort, or riches includes many intangible and unmeasurable elements, as we have already remarked. But in order to make any headway in statistical knowledge, we must try to find some tangible factor which can be measured, and with which the various intangible ones, such as health and happiness, are presumably on the whole correlated. The obvious thing to measure, from all practical points of view, is the amount of money income, in relation to the amount and quality of concrete goods it will buy. When we put the question on this basis, it becomes: how much income must one have to be above the poverty level, to buy the minimum of goods that are necessary for decent comfort? Then we may ask, what share of the population receives less than this income? These are separate problems, each of great complexity. Statistical facts are of considerable help in answering them, but must be interpreted with common sense and with careful analysis of the many factors involved.

8. *Standards of Living*

Let us consider first the question of the amount necessary for a comfort standard. To mention any particular sum of money as a necessary income is of course more or less arbitrary; a few dollars one way or the other may make little difference. Furthermore, one cannot say definitely just what goods are necessary, or of what quality, or of what amount. But one can make extended observations of the amounts earned and spent by families in various years, localities, and circumstances, see what goods are purchased, and at what prices, and form a general idea of the conditions of living associated with the various levels of income and expenditure. Then, if families of a certain level are observed to suffer persistently from malnutrition and from inadequate clothing and housing, that level of income can be said without much hesitation to be below the comfort level. Going up the list, and finding a steady increase of well-being, one can fix upon certain not wholly arbitrary amounts of income as associated with the prevailing concepts of poverty and comfort.

Poverty involves this kind of work for women in the effort to maintain a bare subsistence for the family. (Courtesy *The Survey*.)

Of course any such amounts, and the resulting standards, must be considered as limited in relevancy to the price level of a particular time and place, or else explicitly averaged over larger areas and periods. Furthermore, a distinction must be made between the amount necessary for a child and an adult, for a single individual and a family. An adult is sometimes reckoned as equivalent in expense to one and a fraction children, so that families of various sizes and ages may be reduced to a common denominator. The "standard family" is usually thought of as constituting five members, the parents and three children. This would be an average about sufficient to keep the population constant in size in view of the existence of many unmarried persons. From the viewpoint of national welfare, the economist believes himself justified in holding that the minimum family income regarded as adequate should be large enough to support a family of that size.

It is in making such semimoral judgments, and in applying the terms "comfort," "decency," etc., that there is most room for argument, and no amount of statistics can indicate an answer. Economists at the present time differ considerably as to just where the line should be drawn between the various levels; what one calls "comfort," another calls "minimum for health and decency," reserving the word "comfort" for a slightly higher level. But the first requirement for an understanding of conditions is not to decide where these names belong; it is to form some idea of what the levels themselves mean; what a certain income will buy.

Douglas, Hitchcock, and Atkins, in a recent summary of the figures,[9] distinguish three separate levels below what they call "comfort." The lowest, "poverty," is defined as "a level at which the income, even though expended with ordinary prudence, is insufficient under modern city conditions for even the physical upkeep of a family of moderate size. Characteristics: Undernourishment, overcrowding, deterioration of household equipment and clothing, liability of acute distress with any minor disturbance of the daily equilibrium. The family is either not on a permanent basis of self-support or it is so at the expense of its physical vigor."

In the larger American cities today (1930) families living on from $1,100 to $1,300 would be at this level. The second level is called "minimum of subsistence." Here the income is "sufficient for complete physical and material upkeep of a bare kind, but insufficient either for major emergencies or for any social pleasures that cost money." On this level, fuel-gathering and the use of cast-off clothing cease as major sources of supply; the wife's clothing budget rises to about 75% of her husband's; a family of five occupies at least three rooms; $1,300 to $1,500 would be a subsistence level of income in larger American cities. Of this food would constitute about 40% of the total; clothing, 18%; housing, 19%; fuel and light, 6%, and sundries, 17% (including all house furnishings, health, recreation, education, and insurance).[10]

[9] *The Worker in Modern Economic Society*, 1923, p. 283 f.

[10] The student must accept these figures and others cited here with the traditional grain

The "subsistence plus" or "minimum health and decency" level allows for not only the physical but the elementary social necessities. Some recreation, paid medical attention, car fare, insurance, etc., are possible without subtracting from the rent or mother's clothing allowance. Housing would include the equivalent of a four- or five-room cottage or flat in a respectable neighborhood, in good repair and probably with a basement, running water, private toilet, probably bath, closet, and cupboard space. Food for the family of five would approximate 13,000 calories per day and consist of the cheaper cuts of meat and fish, dried beans, peas, cheese, eggs, milk, butter, oleo, and lard. Clothing would be of the cheapest serviceable grade, but of neat and respectable appearance, preserved by sufficient replacements. The man's clothing budget would be about $90; the wife's, $85; the three children's, $150. The allowance for sundries would permit a daily and Sunday paper and an occasional magazine, stationery, and postage, movies once a fortnight, with five to ten dollars a year left over for excursions and other amusements, 25 to 50 cents a week for tobacco, ice cream, candy, soft drinks, etc. Such a level would have cost in most American cities in autumn, 1928, from $1,600 to $1,800.

The National Industrial Conference Board (an employers' organization) in a study made in 1926 discovered that the average minimum cost of maintaining a "fair American" standard for office workers in the Borough of Richmond in New York City was, for a family of five, $2,203, divided as follows: housing, $432; fuel and light, $116.80; food, $791.44; clothing, $274.64; sundries, $588.12. A similar estimate for industrial workers yielded, for the same size family, $1,870.37. And this was divided as follows: housing, $336; fuel and light, $90.50; food, $791.44; clothing, $230.19; sundries, $422.24. These budgets offer interesting contrasts. It will be noticed that the allowance for food is the same for both families, but that clothing, shelter, and other items are reduced for an industrial worker's family considerably under the requirements for an office worker's family. This may be taken as typical for the country as a whole. For small cities and towns the budget could be somewhat reduced, but not so much as might at first be supposed. Rents might be lower than in New York City, but food, clothing, fuel and light, for instance, would cost approximately the same amount.

Budgets originating in an employing source might be expected to run somewhat low, since these are sometimes used in wage controversies. For an offset we might consider those of The Labor Bureau Incorpo-

of salt. It is obvious that they conceal mysteries. Professor Warne asks, for instance, where in New York or Pittsburgh, three rooms can be had for $25 per month. He is right; it cannot be done. But neither can the other budget items be met with these allowances—or at least one despairs of analyzing the ways in which it can be done. Yet it is done; and the citation of a higher figure would raise the estimate to a level so much beyond that at which many families exist as to become ridiculous. The contrivance mechanisms involved here are among the oldest and most continuous habits of the race. Those who live above these levels have lost a knowledge that only the poor are masters of.

rated,[11] in various places. Following is an estimated minimum health and decency budget for several cities:

AMOUNT OF YEARLY EXPENDITURE NECESSARY

Minimum Health and Decency Budget June, 1929

New York City	$2,160.84
Philadelphia	$2,376.87
Brooklyn	$2,271.95
Chicago	$2,431.96
Schenectady	$2,055.66
Rochester	$2,257.09
San Francisco	$2,532.84
Minneapolis	$2,458.42
Reading	$2,150.08
Los Angeles	$2,490.61

Between these, they give us a fair enough picture of the minimum amount necessary under usual American urban conditions to maintain a family, which uses its income with the greatest care, in decent circumstances. It is never, at present prices, less than $1,800 to $2,000 per year. It may run as high as $2,400 or $2,500 without allowing any margin for careless living or for comforts.

Skilled laborers as a group may or may not be considered to be living in comfort; in the United States they subsist at a level above that which we have been discussing but below that of other large income groups. Pricing of their budgets by the Labor Bureau, Incorporated, showed them to cost, in June, 1929:

New York City	$3,396.63
Chicago	$2,863.32
Scranton	$2,625.29
Minneapolis	$2,861.24
Reading	$2,497.85 [12]

The fourth or "comfort" level is attained by the highest wage earners, and costs at least $2,300 to $2,500. Here food expenses do not rise much, but there is a large increase in clothing, housing and especially "sundries"; the last item passing beyond the 25% mark. A rise in the proportion spent for sundries indicates usually that the family is in possession of the basic necessities and can afford more of the dispensable enjoyments of life, although a family will sometimes insist upon having these luxuries even at the cost of skimping on food and clothing; $2,500, however, is far from a luxury level; families spending almost that amount were found to fall considerably below the minimum diet requirements for health, as worked out by Professor M. E. Jaffa of the University of California. Of this comfort level and those who attain it we shall have more to say in the next chapter.

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[11] An office which has for its purpose the furnishing of data and technical services to labor groups.

[12] These figures were for expenditures actually necessary for the maintenance of the standard reached by certain favorably placed families which were able to maintain five members with allowance for education, amusement, etc., as well as food, clothing, and shelter.

Here it may be remarked that in this book no exact definitions of poverty, comfort, and riches are held to, such as these of Douglas, Hitchcock, and Atkins. We shall not attempt to draw the line between "poverty" and "minimum for subsistence," or between the "health and decency" and "comfort." Roughly, we shall mean by poverty the whole range below health and decency; by comfort the range between that and affluence.

The American Standard? (Photo Hine.)

9. *Below the Comfort Standard; the Lower End of the Wage Scale*

The next problem is to estimate how many of our families fall within the poverty group, thus broadly defined. There are many general guesses, not strictly provable, but made after thorough study of the facts known; for example, the United States Commission of Industrial Relations asserts:

"It is evident both from the investigations of this commission and from the reports of all recent governmental bodies that a large part of our industrial populations are, as a result of the combination of low wages and unemployment, living in a condition of actual poverty. How large this proportion is cannot be exactly determined, but it is certain that at least one-third and possibly one-half of the families of wage earners employed in manufacturing and mining earn in the course of the year less than enough to support them in anything like comfortable and decent conditions."

Whether this is an exaggerated estimate, and whether it is typical of workmen in other industries, will appear from the more explicit figures we are about to examine. Income during the year 1918 has been more thoroughly investigated than that of any other year before or since; so we shall review some of the facts in regard to it, and afterward note what changes have taken place since that time, both in incomes and their purchasing power.

✓ A CONDENSED SUMMARY OF THE DISTRIBUTION OF PERSONAL INCOMES IN 1918[13]
(Excluding 2,500,000 soldiers, sailors, and marines)

Income Class	Simple Distribution		Cumulative Distribution			
			Over the Class Below		Under the Class Above	
	Number of Persons	Amount of Income	Number of Persons	Amount of Income	Number of Persons	Amount of Income
Under Zero	200,000	$ —125,000,000	37,569,060	$57,954,722,341	200,000	$ —125,000,000
$ 0–$ 500	1,827,554	685,287,806	37,369,760	58,079,722,341	1,027,554	560,287,806
500– 1,000	12,530,670	9,818,678,617	35,541,506	57,394,434,535	14,558,224	10,378,966,423
1,000– 1,500	12,498,120	15,295,790,534	23,010,836	47,575,755,918	27,056,344	25,674,756,957
1,500– 2,000	5,222,067	8,917,648,335	10,512,716	32,279,965,384	32,278,411	34,592,405,292
2,000– 3,000	3,065,024	7,314,412,994	5,290,649	23,362,317,049	35,343,435	41,906,818,286
3,000– 5,000	1,383,167	5,174,090,777	2,225,625	16,047,904,055	36,726,602	47,080,909,063
5,000– 10,000	587,824	3,937,183,313	842,458	10,873,813,278	37,314,426	51,018,092,376
10,000– 25,000	192,062	2,808,290,063	254,634	6,936,629,965	37,506,488	53,826,382,439
25,000– 50,000	41,119	1,398,785,687	62,572	4,128,339,902	37,547,607	55,225,168,126
50,000– 100,000	14,011	951,529,576	21,453	2,729,554,215	37,561,618	56,176,697,702
100,000– 200,000	4,945	671,565,821	7,442	1,778,024,639	37,566,463	56,848,263,523
200,000– 500,000	1,976	570,019,200	2,497	1,106,458,818	37,568,539	57,418,282,723
500,000–1,000,000	369	220,120,399	521	536,439,618	37,568,908	57,638,403,122
1,000,000 and over	152	316,319,219	152	316,319,219	37,569,060	57,954,722,341
Total.......	37,569,060	$57,954,722,341				

There follows a table showing the distribution of incomes in terms of cumulative percentages, so that one may see at each level what percentage of incomes fall below and above it. Family incomes average somewhat higher than personal incomes in the lower economic classes, since more than one person in the family usually contributes to the income.

NUMBER OF INCOMES AT VARIOUS LEVELS IN 1918

Annual Income Less Than	Cumulative Percentage of Persons	Cumulative Percentage of Incomes	Annual Income Less Than	Cumulative Percentage of Persons	Cumulative Percentage of Incomes
$ 600............	9.5	2.4	$ 5000.........	97.8	81.2
800............	22.4	8.3	6000.........	98.4	83.5
1000............	38.7	17.9	8000.........	99.0	86.3
1200............	54.5	29.1	10,000.........	99.3	88.0
1400............	67.1	39.7	15,000.........	99.6	90.5
1600............	76.0	48.3	25,000.........	99.9	93.6
1800............	82.0	54.9	50,000.........	99.94	95.3
2000............	85.9	59.7	100,000.........	99.98	96.9
2500............	91.4	67.5	500,000.........	99.998	99.1
3000............	94.1	72.3	1,000,000.........	99.9996	99.5
4000............	96.6	77.9	Over $1,000,000....	.0004	.5

In 1919 the United States Bureau of Labor Statistics made an extensive investigation of family incomes during the preceding year, based on 12,000 white and 750 colored families in ninety-two localities within forty-three states. The following table presents a summary of some of the findings:

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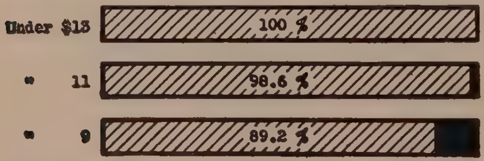
[13] From *Income in the U. S.*, by the Nat. Bur. Econ. Research, N. Y. 1921.

EARNINGS OF FAMILY AND OF HUSBAND BY SIZE OF FAMILY AND INCOME GROUP[14]

Income Groups	Number of Families	Percentage of Families	Average Persons per Family	Average Family Earnings	Average Husband's Earnings	Percentage Husband's of Total Earnings
Under $900	332	2.74	4.3	$ 782	$ 766	97.9
$900–$1199	2423	22.7	4.5	1037	1014	97.7
$1200–$1499	3959	55.5	4.7	1294	1252	96.8
$1500–$1799	2730	78.1	5.0	1566	1488	95.0
$1800–$2099	1594	92.3	5.1	1854	1691	91.2
$2100–$2499	705	97.1	5.7	2161	1786	82.75
$2500 and over	353	2.92	6.4	2684	1796	66.9
Total	12,096	100.00	4.9	1455	1349	92.73

The average family income for the entire group was $1,513, of which $1,347 was derived from the earnings of the husband.

How do workmen in various industries compare with each other as to income? This question is of importance in showing where in our system the need is greatest. The New York Department of Labor in a report[15] on wage earnings for September, 1929, gives statistics for the eleven principal industries for the state. The highest paid (printing and paper goods) men received a weekly wage of $43.64, or $2,269.80, if employed steadily throughout the year. The average for all men employed was $34.81 a week, or $1,810.12 a year. The highest weekly wage received by women (clothing and millinery) was $21.66, or $1,126.32 a year. Wages of women have been especially low, in all industries. An investigation of 26,500 women workers in Tennessee in 1917 showed 70% receiving less than $9.00 a week. Of 800 women in the District of Columbia interviewed in 1918, 64% received approximately $10.00 a week. Out of 113,643 women workers in New York in 1919 who had replaced men, two-thirds received less than $14.00 a week. Wage investigations by the Massachusetts Minimum Wage Commission in five industries have revealed the following: Women receiving under $9—candy, 62.8%; canning, 89.2%; corset, 36.8%; paper box, 39%; sweaters,



This chart illustrates graphically the situation in the canning industry cited herewith.

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[14] Adapted from *The Monthly Labor Review* of the Bureau of Labor Statistics, United States Department of Labor (December, 1919), pp. 29–41.

[15] *The Industrial Bulletin*, Industrial Commission of New York State, Albany, New York, October, 1929, Vol. XIX, No. 1, p. 15.

35.8%. Under $11—candy, 85.1%; canning, 98.6%; corset, 57.5%; paper box, 59.4%; sweaters, 57.6%. Under $13—candy, 94.5%; canning, 100%; corset, 76%; paper box, 77.2%; sweaters, 76.7%.

The next two tables [16] show the wide discrepancy in most industries between the actual income received and the amount called for by the Phila-

AVERAGE EARNINGS OF MALE EMPLOYEES IN TWELVE INDUSTRIES

Industry	September, 1918		March, 1920	
	Average Actual Weekly Earnings (a)	Average Yearly Earnings (a x 52)	Average Actual Weekly Earnings (c)	Average Yearly Earnings (c x 52)
Boots and shoes	$23.62	$1228	$28.70	$1492
Chemical manufacturing	25.24	1312	35.72	1857
Cotton manufacturing	20.50	1066	24.87	1293
Furniture manufacturing	17.39	904	22.87	1189
Hosiery and knit goods	22.50	1170	27.65	1438
Leather	23.36	1215	30.18	1569
Metal manufacturing	27.73	1442	29.79	1549
Paper manufacturing	23.20	1206	28.82	1499
Printing and publishing	23.69	1232	31.67	1647
Rubber manufacturing	27.93	1452	36.32	1889
Silk manufacturing	21.48	1117	28.98	1507
Wool manufacturing	22.93	1192	28.70	1429

INDICATED YEARLY EARNINGS COMPARED WITH AMOUNT NECESSARY TO MAINTAIN THE PHILADELPHIA STANDARD

Industry	September, 1918		March, 1920	
	Amount Needed to Bring Full-Time Yearly Earnings to Minimum	Percentage Increase Needed to Bring Full-Time Yearly Earnings to Minimum	Amount Needed to Bring Full-Time Yearly Earnings to Minimum	Percentage Increase Needed to Bring Full-Time Yearly Earnings to Minimum
Boots and shoes	$409	33	$393	26
Chemical manufacturing	325	26	28	2
Cotton manufacturing	571	54	592	46
Furniture manufacturing	733	81	696	59
Hosiery and knit goods	467	40	447	31
Leather	422	35	316	20
Metal manufacturing	195	14	336	22
Paper manufacturing	431	36	386	26
Printing and publishing	405	33	238	14
Rubber manufacturing	185	13	4 *	. .
Silk manufacturing	520	47	378	25
Wool manufacturing	445	37	393	26

* Indicates excess.

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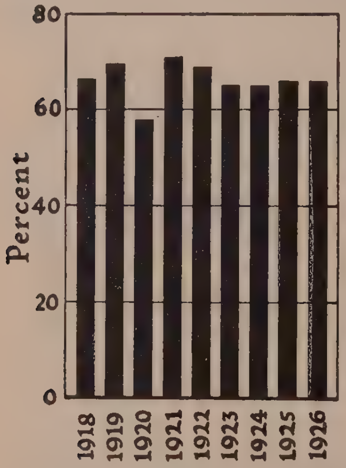
[16] From Douglas, Hitchcock, and Atkins, *The Worker in Modern Economic Society*, pp. 302–303.

delphia minimum standard of health and comfort. The amount fixed upon in that standard for 1918 (by the Philadelphia Bureau of Municipal Research) was $1,637 for a family of five. In November, 1919, the amount was raised to $1,803, and in August, 1920, to $1,988, because of rises in price levels. If the increase was evenly distributed between these two dates, the amount necessary in March, 1920, would have been $1,885. But the actual earnings were as shown in the table on page 119. There is no way of estimating how income in very recent years has been apportioned among the lower groups of income receivers. An estimate can be made, however, of the percentage received by the richest 10 per cent of the population. The accompanying chart shows this for the nine years before 1926.[17]



(Adapted from material in *Recent Economic Changes*, p. 836.)

If we assume that about 30 per cent of the income goes to 10 per cent of the population, 70 per cent of it must be somehow apportioned among the other 90 per cent. This we know; but it can scarcely be called more than a useful point of departure. We have to turn to other and less direct evidence if we would attempt to establish the extent of poverty.[18] We do know, of course, from figures published by the National Bureau of Economic Research that the average income of those who were gainfully employed in 1926 was $2,010. About 80 per cent of these [19] would be heads of families. Some families would have additions to this income from other members, and some would not. But, in any case, these additions, as we have seen, would be small. We cannot say that the average family has an average income of $2,010. All we can infer is that if some considerable percentage of our income goes to a relatively small number of families, there must be others less fortunate. To this uncertain number we can also add the dependents of whatever number of unemployed we find acceptable (these figures also being subject to dispute). The figures hazarded previously are perhaps as close an estimate as we are justified in making. It was said, it will be remembered, that from 2 to 3 millions of rural families probably live in poverty; and that some 3 million urban families must also live within this income group. Altogether about 5 or 6 million of our 26 million families must be chronically destitute or nearly so. There are involved, then, about one-sixth of the population. This, also, is an estimate for normal times and is, therefore, what seems to us a minimum estimate. In times of general depression there must be many more.

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[17] Adapted from *Recent Economic Changes*, p. 836.

[18] There will soon be a new census (in 1930) and more information will become available as its results are published in the succeeding years.

[19] Calculated from census reports of the numbers of different age-groups and sexes in the "gainfully employed" class.

This may at first seem a startling conclusion, especially to one who has read much in contemporary newspapers and periodicals concerning American prosperity, but it receives confirmation from every possible source of quantitative information. A Chicago study of 467 families, published in 1927, for instance, has this to say in a concluding chapter:

"When a comparison was made between the earnings of the chief wage-earners and the budget estimates, it was found that in more than two-thirds of the families these earnings were insufficient to provide a standard of living equal to that of the Chicago Budget. This fact is especially significant when it is recalled that this group of laborers was unusually well situated, as they had been regularly employed throughout the year and had, for the most part, been in the employ of these firms for several years.

"The great importance of the other sources of income, therefore, became evident; and it was not surprising to find that there were other sources of income in 355 families. These sources were found to include the earnings of the wives and children; payment from boarders and lodgers; income from property, benefits, borrowed money; and gifts from friends and relatives. The utilization of these sources is important, not only because of their value in increasing the size of the family fund, but because of the consequences involved in the use of some of them. The fact that it was necessary in 108 families for the mothers to work—and to work at jobs of a particularly arduous type—means undoubtedly a lowering of the standard of living in those families and the consequent sacrifice of the welfare of the dependent children in those families. The presence of boarders or roomers in 100 families, and the overcrowding which results from these additional members of the household, constitute another factor in lowering the standard of physical and moral well-being in those families, which cannot be disregarded.

"*When all these sources of income had been included, it was found that just over one-half of the total number of families were able to maintain a standard equal to or above the estimated Budget.* Since this was the case, it became necessary to learn what standard the group as a whole was maintaining in order to answer the question as to whether this Budget estimate was a reasonable one. Analysis of the general living conditions of the whole group and of the food consumed by a smaller number of families has shown quite clearly that the families living on a lower standard than that provided by the Budget estimate are living under conditions which fail utterly to provide a standard of living that will make possible a high standard of physical, mental, and moral health and efficiency for adults, the full physical and mental growth for children, and make provision for this moral welfare. Further emphasis is given to this conclusion by the discovery that a relatively large number of families—134—found it necessary to supplement their incomes by making use of free services provided by social agencies. Without these the general standard of living would fall to an extremely low level." [20]

Poverty, apparently, is still with us, and not decreasing so fast as the optimist would have us believe. What is to be done about it? There are two current answers, neither of which is based on intelligent reflection. One is to dismiss the fact from mind as rapidly as possible, trusting to luck that all will come out right, and branding as a calamity howler anyone who takes a less rosy view. The other is to rush to the extreme of proposing a violent revolution, without any clear idea of how the situation is to be mended. In later chapters we shall see the possibility of an intermediate attitude, one that seeks to analyze causes specifically and discover gradual, practical remedies.

An alley such as this is represents the great failure of industrial life. What desirable qualities in men and women could possibly develop here? (Photo Hine.)

Meanwhile, poverty remains a source of many miseries in our national life. It is an important recruiting area for criminals and degenerates whose influence spreads upward to disorganize others more fortunately placed. Petty thievery, violent crimes, strikes, mob rule, epidemics of disease, are a constant reminder that our economic system is still unsound at bottom. There are many ways of dismissing this reminder, with some careless explanation—Bolshevist propaganda, moral decline or greed among the laboring classes. But these facile theories, even if true, leave untouched the main problem of why discontent and crime find so easy a foothold among the rural and urban poor. Opportunities for the formation of coöperative habits and ideals are lacking for a great share of our population; obstacles are in their way which prevent orderly growth toward happiness and constructive work, and the removal of these obstacles is a necessary step in the economic progress of society as a whole.

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[20] *The Income and Standard of Living of Unskilled Laborers in Chicago*, by Leila Houghteling, University of Chicago Press, 1927.

CHAPTER 7

COMFORT

1. *The Basis of Rural Comfort*

By comfort we shall mean a state intermediate between poverty and riches, or rather the infinite number of various states and degrees of prosperity between these two extremes.[1]

By contrast with poverty, sufficient material goods are obtainable, without keen struggle, to satisfy basic demands and provide some luxuries. Work offers some outlet for creative powers; there is opportunity, at least in leisure time, for education and enjoyment. By contrast with riches, there is not complete freedom from the need to work for a living, and not everything purchasable for money is within reach. With the comfort level as with the poverty level, there are many differences between country and city as to its necessary conditions and the forms it takes, so that it will pay to consider these two aspects separately. We shall, therefore, postpone for the moment discussion of the implications of comfort in the cities and concentrate on its rural aspects.

Under more primitive conditions of life in the open, health and happiness were possible with a very few material accessories. The savage dweller in a temperate country, provided with game and wild plant food, where conditions demanded action and cunning, giving in return health and freedom from "nerves," where neither excessive cold nor barren soil made the struggle bitter, and where nature was not so bountiful as to make him lazy—such a man was surely above the poverty level in mind and body. But in the modern civilized order a country dweller must, as a rule, live in a certain way and possess certain things to attain comfort. In a later chapter the student will find a discussion of the problems of farm production. We are not particularly concerned with them here. One of the necessary conditions of rural comfort is good producing equipment, though it has always to be remembered that farming is not only an industry but also a domestic arrangement. It is a way of living together, not only a way of working. For this reason the producing and the consuming of a farm are inextricably mingled. Just here we shall glance at the country home of the comfortable rural dwellers, at the food consumed there, and at its amusements as well as its work of way. The description which follows must not be taken as representative of all rural life. Indeed, we have already described another kind of rural life lived on the poverty level; and although comfort is commoner —at least a livable degree of comfort—in country life than in urban life, there are still all too many people living in conditions that are not, by any stretch of the imagination, to be described as comfortable. Where the comfort level is attained, however, the life that is achieved has many amenities peculiar to itself. It is to this life and its unique features that we turn in this chapter.

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[1] Not necessarily the "middle class" or *bourgeoisie,* in the narrow sense of these terms.

2. *The Country Home*

The generations just past, in America, would know the country home without any formal description because many of our ancestors were born in one of them. They are still to be seen, of course, if one goes to the country, but the fact is that much of the old significance of the home has been lost, as we shall have occasion to remark again later on, so that though we may see the old houses still standing, they mostly seem only to wait patiently for their dissolution in the "slow and smokeless burning of decay." For the home of the comfortable American tradition was a large frame house set under shady trees and with a lawn-space spreading out to the passing

This photograph, made in 1890, shows a New England house which was characteristic of the period in rural America—and America was largely rural then. The picture was evidently taken to show the fine herd of cows, but it furnishes, also, an unintended picture of a comfortable and self-sufficient farm home, shaded by elms, possessing its inevitable cherry tree and lilac bush, set back from a township road and looking over broad fields, guarded by low stone walls. (Courtesy The Society for the Preservation of New England Antiquities.)

road; it stood quite alone and had a self-contained, even a self-sufficient air; and well it might, of course, for a whole family's activities centered here and were mostly carried out within view of its windows. But now there has come a change. Houses need not be so large any more! Indeed, they must be not so large. Families are smaller; and every extra room counts for additional burden to the woman who must care for it. Children are away at school, probably in the near-by village, much of the time from the fifth to the seventeenth years. The number of acres under the care of the family has probably shrunk, since there are few boys to help the father.

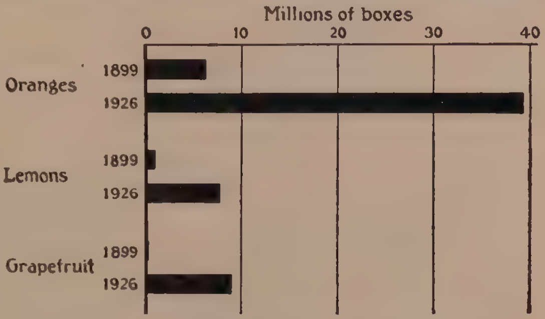
As fast as the old houses wear out they are being replaced by new ones. And the new ones are better suited to their purpose. They are smaller, but they are tighter against the winds of winter and cooler under the summer sun; they are apt to have furnaces and running water, perhaps even electric lights, probably concrete foundations and a cellar. The old home was and had none of these things. But they are a part of a comfort level of life.

3. *Food for Country Living*

Not many years ago, before the modernizing of our systems of transport, especially before the day of the concrete road and the motor car, folk who lived upon the land were confined pretty much to the food that could be grown upon the home place or near it. There has been a steady improvement, however, and now it is a remote farm indeed that, if the farm is prosperous enough, cannot furnish a table as varied and consequently as healthful as any in the towns.

Every locality is naturally better suited to the growing of some particular crop than of many others. So, many famous dairy districts such as the hill-countries of New York, Pennsylvania, and Wisconsin, have frosts so late in spring and so early in fall that slow maturing vegetables or fruits cannot ripen in the short summer season. Folk in such regions have to be content to confine their efforts to making dairy products—milk, butter, and cheese—or to the growing of grains, root crops, and legumes. These they sell in the market centers and with the money they receive they purchase the products, for instance, of the fruit grower, who lives in a country of longer summers, or of the sugar-cane or coffee growers, who live in distant lands with totally different climates.

There is an obvious advantage in this. The hill farmer, instead of having to live all winter on salt pork and home ground flour, can keep up his family's health by furnishing his table with vegetables from low countries, fruits from the semitropics, and even occasional importations from far countries. He in turn furnishes a hungry world with the products of his dairy and grains from his fields; and, in consequence, the truck farmer or the fruit grower who can ill afford to grow grass for cows on his valuable land, can buy dairy products in the market for far less than it would cost him to produce them for himself. When each locality thus pursues the type of agriculture for which it is best fitted and exchanges its surplus for the surpluses of other localities, all who engage in the process benefit. This, of course, is the fundamental reason why there is trade in the world at all, and the reason why the modern development of commerce has gone so far. We are too apt to think of trade as a burden upon the world instead of as the contribution to human well-being, which, of course, it is. And in no respect, perhaps, has it contributed more to the pleasure and the health of the race than in changing the rural diet. It was not altogether the strain of hard physical labor which caused the degenerative diseases, the rheumatism, and the generally high death rate among an older generation of farmers. It was partly, at least, their diet. For the body, as modern physiologists have discovered, needs green vegetable foods and fruits for vitamins and roughage. And a diet of salt meat, potatoes, and pie is not the kind which is wanted—particularly through the winter months. Another great change has been the decrease in consumption of the alcoholic liquors which, taken steadily, have so deleterious an effect upon the system. The new diet, including foods from all the world—and particularly, of course, the sugar from the beet and the cane that forms so large a part of it—has diminished the need for alcoholic stimulation. Where this has happened the decline in the use of liquor has followed naturally.



A revolution in the national diet is taking place. The great increase in citrus fruit consumption is an important evidence of it. We have advanced a long way from the era of local self-sufficiency in foods. (Data from U. S. Department of Agriculture.)

All these changes have been for the better. They have made life pleasanter and healthier and they have made it longer; it seems fair to say that they have very appreciably helped to raise the living level of the masses of country dwellers nearer to comfort.

4. *Country Work* [2]

Whatever else we may say of farming as an occupation, it must be admitted that it is better suited to the human mechanism than most other kinds of work. The factory worker is apt to be a machine tender in the present phase of industrial development, and to have to bend for long hours above a moving machine monotonously repeating a limited set of motions. At such a job he uses almost none of his mental powers and but a few of his physical mechanisms. At least a farmer's work requires brains for planning and the use of a complete physical equipment.

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[2] See also Chs. 7 and 8 for a discussion of farm production.

Jobs done in the course of a week's activities on a dairy farm in the month of June. The farm is located in Wyoming County, New York. The equipment consists of 20 cows, tractor, team of horses, pigs, sheep, and chickens besides the usual quota of machinery for carrying on the work of mixed farming:

Milking and feeding cows.
Caring for milk.
Taking milk to market.
Caring for work animals and tractor.
Fitting ground and drilling seed.
Harvesting first crop of alfalfa.
Harvesting peas.
Gardening.
Spraying fruit.
Planting winter potatoes.
Placing new concrete.
Repairing motors.
Making small repairs on fences and buildings.
Caring for pigs, sheep, and chickens.

There may be a temporary monotony about hoeing corn or plowing a field, but it is only temporary. There is a new and different job to be done tomorrow or next week.

And if this is true of the farmer, himself, it is just as true for other members of the group who "work the farm." Farm women are beset by problems, but they are the problems of a working woman with a real place in the economic world, not, like those of her city sister, largely either makeshift invasions of the male working world or feeble attempts at the disguise of economic uselessness. The country woman, mistress of a home which is the operating center of the productive unit—the farmstead—is in a situation that could scarcely be bettered, if woman cares to bear a significant part of the common burdens of the race. She not only controls the family budget, she has an indispensable part in the producing activities of the place. The city woman, if she has any touch with the productive world, has it apart from her home life. In a sense it is the enemy of her family's solidarity, not its coördinating force.

Children too have in many ways a better chance than city children have; they learn to help with real work—the boys in barns and fields, the girls in kitchens or sewing-rooms. There is freedom and space and there are endless interesting affairs to pursue from morning until night in farm and house, in garden, orchard, and field.

The farm home maintained at the comfort level may legitimately claim all these advantages of the working life over that life in the cities. The city worker is too apt to be confined, to have a monotonous and wearing job and to have to find his family life apart from his work in cramped quarters supplied with too little light and air and freedom, although this paints too black a picture of the middle class life of the towns. Really, the farmer, even though he is a manual worker, ought, perhaps, not to be compared with the urban worker. He is both worker and business man. And his life is the more complete for being both. He plans and directs and he also labors.

Farm work follows a cycle determined by the changing seasons. In spring the land has to be got ready for planting—plowing, harrowing, and fertilizing have to be done in all the tillable fields. Then the planting has to be done. As the crop springs up it has to be hoed and cultivated to keep it clear of weeds and to keep the soil loosened and free. In midsummer there is hay to be cut and stored, later there is grain harvest and fruit harvest and all the varied activities of this time of traditional richness and plenty. Late fall sees plowing for spring begun again and winter furnishes a time for tree pruning and wood cutting, the repairing of fences, machinery, and barns, the careful tending of stock and planning for the new year. All in all, it is a varied round, yet sufficiently repetitive to train its workers and to build up standards. It is a full life, too, that calls out the best and fullest capabilities of men. But this supposes, of course, the fulfillment of the conditions for the attainment of the comfort level that will be discussed later: fertile land and enough of it; nearness to markets; a favoring climate and an advanced state of the industrial arts. If these are lacking, the comfort level is difficult to attain and the family will be found to be existing on a lower level of economic life. There will be a shack or hut for a home, with little furniture or decoration, the food supply will be limited and confined to the poorest

The conditions under which children play in the city and in the country. The country offers safer, more healthful, and more spacious playgrounds. (Photos by Playground and Recreation Association of America and Lewis W. Hine.)

quality, malnourishment of the whole family will become chronic; work will be shirked because of a lack of energy and will tend to be of the drudgery sort, and because work of this sort yields but small returns, the standard will fall lower and lower until the family will find itself existing in that indefinite borderland between destitution and independence that is so well known a phenomenon in every community. A family in this condition is the easy prey of every disease and vice known to rural life. It is comfort which forms the family bulwark against the ills of life. And it is comfort which furnishes the basis of progress.

5. *Country Amusements* [3]

The rural amusements in America, where country life is lived at the comfort level, can be and still are much more of the traditional sort than the changing life of the city knows. The older farm festivals have, of course, very nearly disappeared except in the more remote of the rural regions of the country. There are less frequent social gatherings coinciding with the climaxes of the year: the husking bee, the harvest festival, the country fair, the sugaring off, and the like. These have pretty much disappeared, though they still exist in some places; but the tradition of them still persists and colors the amusements of country life with a distinctive flavor of the soil which is quite lacking in the more sophisticated amusements of urban people. That flavor of the soil seems to give them a more satisfying and lasting quality.

(From *Harper's Weekly*, November 13, 1858. Used by permission.)

Profound changes have reached this department of country life as well as all others through the medium of the changes in the industrial arts, for now concrete roads are spreading widely and where roads are not concreted they are often at least improved. The automobile has become so cheap that nearly every country family can have one, even if it has to be decrepit from age and ugly from nature. And these two—roads and automobiles—between them have brought the farm closer to the city than farms have ever been to cities before. For the first time in America, life, at least rural life, has become community life. Other agencies have had a part in this transformation too, such as the telephone, cheap magazines and other literature, and later on, of course, the radio. The farm family now can enjoy and does enjoy amusements no different in kind from those which city people have. A village has to be very small indeed not to have a moving-picture show, a church, and even perhaps a library. And a home has to be a very poor home indeed which does not have a phonograph and a radio.

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[3] See also a later chapter on the making of farm life more satisfying and beneficial.

This change from the traditional amusements of rural America to the kind of amusements which industrialism and the city life between them have made possible has undoubtedly affected the rural culture of the United States. For one thing it has tended to lessen the cultural differences between country and city and so has very decidedly smoothed out regional differences in public opinion and made the thought of the American people really an American thought and not one devoted exclusively to local problems. But aside from these phases of the situation the important thing is to see that the coming of a new kind of amusements has been a distinctive gain to the country dweller. It has given him the advantages of city life without the crowding of that life and without the monotonies and pressures of its kind of work. Country dwellers on the comfort level are no longer "hayseeds": they know the latest fashions through the magazines; they hear political speeches over the radio; they see and hear the doings of the world at the "talkies"; they are in constant touch with the newest views of all kinds of popular leaders.

The radio has brought a new world within reach of the rural home. (Courtesy General Electric Company.)

All of this kind of amusement which has crept into country life is, of course, deplored by many old-fashioned country-folk, for there are still many such. The country man or woman of the old school who was raised in an atmosphere which required of him that he be self-reliant, shrewd, and simple in his tastes, thinks of the uncomplicated environment in which he was raised as a model of the most desirable sort and thinks of the innovations which seem so attractive to his descendants as decorative features of life which are apt to be enervating and to lead to futility. He clings to his simple notions. He wants little to do with newfangled art or even with newfangled science. He reads his Bible and clings to the decalogue as an ethical guide. He conceives of woman's job and her life as being quite as simple as his own, and he resents the attempt of his daughter or his granddaughter to find herself new alignments in a new world. But his dissent from progress is not effective any more than conservatism is ever effective in hampering progress. Changes occur in spite of backward-looking country-folk. New generations go their own way and it is a way which is very different, producing among their number a new kind of individual, among their communities a different kind of life, and giving them a new relationship to the nation as a whole.

6. *Education in Country Life*

One of the reasons why rural education has been hitherto so very backward is that rural life has always been so very much simpler and less complicated than city life and therefore has called for less training in preparation for it. In a simple rural economy where most of the tasks are done by hand and where most of the processes are of the sort which are carried on in traditional ways by methods passed down from father to son, very little book learning is necessary. The newer methods of production in agriculture, the new social organization, the different kinds of amusements, and the new mutual rela-

A "little red schoolhouse" where one teacher usually carries on the work of all grades in one small room. (Milbank Memorial Fund. Photo Hine.)

tions between country and city have changed all this and have created a new necessity for a real rural educational system. Only a beginning has been made so far, but it is a splendid beginning, and promises as rapid a fruition as popular education has had in city life in the past two generations. Here again the automobile and the improved roads have influenced the situation. They have made it possible for children to go longer distances from home to school and this has meant that larger groups could be built up and larger groups can have an institution of the kind that could never be built up in the "little red schoolhouse" of tradition.

The farm is rapidly becoming mechanized in the United States. Tractors and other complicated machines are beginning to be used to fit the soil, other machines are used for cultivation and yet more complicated ones engaged in harvesting. Dairy farms use milking machines, wood is sawed by power; in fact most of the processes of work that had to be done a generation ago by sheer physical strength of man and beast may now be performed with the ease that machinery performs all its tasks. Farm work need no longer tax the strength and endurance of men. It taxes rather their qualities of cleverness and intelligence. Cleverness and intelligence can only be brought to full development in an educational system which aims specifically at that end. Apprenticeship on the farm without "going to school" is no longer sufficient.

7. *City Dwellers on the Comfort Level*

Above the penniless unskilled laborer in a large factory are foremen and skilled artisans of various sorts, machinists, carpenters, and electricians, together with a corps of office workers, clerks, bookkeepers, and stenographers. They in turn are directed by petty officials, sales and advertising managers, heads and subheads of departments. Miscellaneous experts are fitted in as auditors, attorneys, and the like, or consulted when necessary on payment of a special fee. In the town around are doctors, clergymen, school teachers, working as private professional men or in the pay of business houses or municipalities. A cluster of banks, shops, restaurants, laundries, and other small enterprises will be found on the outskirts of the factory districts, and scattered through the residential streets. Most of the men who carry on these activities, and many more, with their families, go to make up the vast intermediate strata of our urban economic life. We may class them in general, along with the prosperous farmer, on the comfort level, because of the quality of the work they do and the quality of the goods they receive for it.

8. *Their Incomes and Expenditures*

In order to maintain a comfort standard, the family must continuously receive a money income enabling it to buy the necessary goods and services involved. Much study has been given to the problem of determining the sums of money required for the comfort standard, some of which was summarized in the last chapter. Once more it must be insisted that the subject is not capable of exact statistical exposition since the amount and quality of goods considered necessary for comfort is largely a matter of subjective feeling or arbitrary decision. Furthermore, the facts involved are so complex and constantly changing (because of price levels and other variables) that no comprehensive survey has yet been made.

Switchboard operator and assistant in the control room of a power station. They are typical members of the group which makes up our city "comfort dwellers"—typical in the kind of work they do and the kind of things they have to use. (Photo Hine.)

If we select arbitrarily some figure, say $2,000 a year, as representing the minimum income for a comfort standard (though, perhaps, $2,500 would be a better figure), it is possible to estimate what proportion of families come up to that standard. In 1918 only 14 per cent of the total number of incomes in the United States amounted to $2,000 or more. In 1922, out of nearly seven million taxable incomes, 2,129,898 were between two and three thousand dollars; 758,267 between three and four thousand; 404,848 between four and five thousand, and 391,373 between five and ten thousand. About three and a half million incomes, then, were taxed as between $2,000 and $10,000. This amounts to a little over half the total number of taxable incomes, and about one-eleventh of the estimated total number of incomes in the United States. The vast majority, of course, are not only below this level but below the minimum for taxation.[4]

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[4] No later figures are as yet available (1930) which are comparable with these.

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What will such an income buy? That depends, of course, on the prices in force at a particular time and in a particular locality, and on the skill with which the income is expended. The question is therefore not capable of a definite answer. But there are many fragmentary studies which are helpful in forming an estimate, based on special cases and small groups which are considered by experienced investigators as fairly typical of the country at large. If allowance is made for the unreliability of the small number of cases, and for variations of time and place, such studies may be consulted to advantage.

In 1918–19, for example, the Department of Labor gathered statistics on over twelve thousand families in 92 industrial centers, which give some idea of the way income is divided on the comfort level. To the poorer of these families we have already referred in the last chapter. The two highest income groups we may call here F and G; the former, including 705 families, averaged $2,272.18; the latter, including 353 families, averaged $2,790.25. Group F average 5.7 persons to the family; group G 6.4 persons; the equivalent in adult males being 4.09 and 4.95. On the average, group F spent in a year on food $711.86; G spent $859.98. On clothing, F spent $384.20; G spent $503.03. On rent, F spent $248.35; G spent $260.21. On other and total expenses, F spent $2,054.97; G spent $2,466.91. At the end of the year, 585 families in group F had surpluses averaging $290.65, and 102 had deficits averaging $165.58. In group G, 306 had surpluses averaging $404.45; 45 had deficits averaging $213.81. The figures are completely represented in the table following:

		AVERAGE PERSONS IN FAMILY		AVERAGE YEARLY EXPENSES PER FAMILY FOR				SURPLUS		DEFICIT	
INCOME GROUP	*No. of Families*	*Total*	*Equivalent Adult Males*	*Food*	*Clothing*	*Rent*	*Other and Total*	*Families Having*	*Average Amount*	*Families Having*	*Average Amount*
Under $900............	332	4.3	2.89	$371.61	$111.63	$121.65	$842.91	137	$47.59	144	$114.48
$900 and under $1,200...	2,423	4.5	2.98	456.16	456.45	149.63	1,076.12	1,306	67.62	838	107.39
$1,200 and under $1,500..	3,959	4.7	3.16	515.56	206.50	179.73	1,300.71	2,731	106.27	977	122.48
$1,500 and under $1,800..	2,730	5.0	3.36	571.75	257.38	207.13	1,536.68	2,112	157.74	525	143.21
$1,800 and under $2,100..	1,594	5.1	3.59	626.52	306.94	231.94	1,755.74	1,315	232.41	240	155.57
$2,100 and under $2,500..	705	5.7	4.09	711.86	384.20	248.35	2,054.97	585	290.65	102	165.68
$2,500 and over.........	353	6.4	4.95	859.98	503.03	260.21	2,466.91	306	404.45	45	213.81
All incomes	12,096	4.9	3.32	548.51	237.60	186.55	1,434.37	8,492	155.31	2,871	126.85

For further and more specific illustration, we may take an article by Anna Rochester on the expenditure of eleven typical families on the comfort level.[5] Their budgets, though beyond the reach of the average wage-earner, may perhaps be taken as representative of the outlay considered essential by families of moderate wealth. Since the figures are not to be taken as exact, we may disregard the variations (not extremely large) in prices from locality to locality and from year to year.

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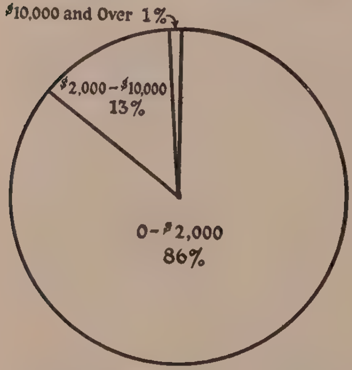
[5] "What Eleven Families Spend," in *The World Tomorrow*, June, 1922.

The fathers of families who contributed figures were mostly professional men: an engineer, a social worker, a lawyer, a teacher, and six writers and organizers in the field of social activity; one was a business man. Five states were represented; Georgia, Connecticut, New York, Pennsylvania, and New Jersey. In every case, both the father and mother were living and there was at least one child. None of the children was more than eleven years old, and no family had more than four children. Eight families who gave their total expenditures during twelve months reported amounts (exclusive of contributions, savings, life insurance, and income taxes) from $2,139 in a family with one child to $7,209 in a family of three children and three adults. The expenses were divided into three headings; housing, food and clothing, and other expenditures.



The apportionment of our national income. 86 per cent of personal incomes are less than $2000. This does not mean indigence always, for the main wage-earner's income may be supplemented by those of other members of the family. But it suggests an indeterminate, but considerable, proverty group, since the earnings of women and children are apt to be casual, small, and largely the result of pressure.

Housing conditions were varied, including apartments, semidetached houses, and houses with windows on all sides. All except the smallest apartment, where four persons lived in four rooms and bath, had a margin of space beyond the one room per person which is the standard given in the "minimum for health and decency" budget of the U. S. Bureau of Labor Statistics. Three familes owned their homes, three were buying their homes on some part-payment plan, and five paid rent. The three families owning their homes reported actual expenditure during the year for such items as taxes, repairs, insurance, and interest on mortgage plus fuel and commutation, ranging from $400 to $1,104.50. The payments toward the purchase of the dwelling, including also fuel and commutation, ranged in the second group of three families from $618.02 to $1,530. The lowest rent was paid for a five-room-and-bath apartment in a model tenement in New York. The highest, $1,128.25 including fuel and commutation, was paid for a detached suburban dwelling near New York. Since more space was used than the minimum for health and decency, more household equipment was needed, and more expenditure for renewals, upkeep, and household supplies than is included in any minimum budget. In its most generous budget, the Bureau of Labor Statistics included a total of $206.92 for three items: upkeep of house, furniture and furnishings, $70; laundry work, $104; and cleaning supplies and services, $32.92. In each case but one of the eleven, the total family expense for these items exceeded this minimum estimate, in spite of the increased purchasing power of the dollar in 1921 over the 1919 prices on which the bureau's figures were based.

For food, the annual expenditures in four families were between $775 and $800 a year. Each of these families had one or two children, all under eight years of age. The other family of only four persons had two children seven and ten years old and spent $816.65. A family with two full-time wage-earners and four children spent $1,460, and one with one full-time wage-earner and three children spent of $1,887. Reckoning all ages alike, the average monthly expenditures ranged from $15.21 in a Georgia town to $37.50 in a suburb of New York. In the estimated "health and decency" minimum for a government employee's family in Washington in 1919, the food allowance for a family of father, mother, boy of eleven, girl of five, and boy of two, was $773.93, or a monthly average of $12.85 per person. The clothing expenditure for parents and children ranged from $270 to $780; in the case of four families it followed very closely the minimum budget, and in no case greatly exceeded it.

"The remaining expenditures," remarks the author, "for such things as recreation, books, schooling, travel, medical care, presents, plants and flowers, and sundries mark perhaps the greatest differences between the minimum standard and a way of living which is simple but comfortable. The minimum budget allows less than 50 cents a week for amusements, and no vacation; it allows for newspapers $8.40 a year, but nothing for books or school fees. For travel it allows $45 during the year, including all carfares. For 'labor organization' which perhaps might be added to amusements or education it allows $10 a year. For health care the minimum budget allows $80 during the year. Incidentals are estimated at one dollar a week. For all these items together, including labor organization, the minimum budget allowed $215.40 in 1919." In the eleven families, the amounts spent for school, travel, recreation, books, presents, plants and flowers, and sundries, varied from $184.26 in a family with two small children, living in the country, to $1,211 in a suburban family with three children. The second largest amount spent for these items was the $906.83 reported by a family with less than $3,000 total expenditure.

"Even the simplest of these eleven budgets," the article concludes, "is more generous than the 'minimum of health and decency' budget suggested by the Bureau of Labor Statistics. This, in turn, is above the average actually available for families in the United States. It is far above the earnings of the coal miners. . . . It is far above the average earnings of railroad workers.[6] It is far above the average income and still farther above the median income of all persons having an income whether from wages or any other source whatever in the United States."

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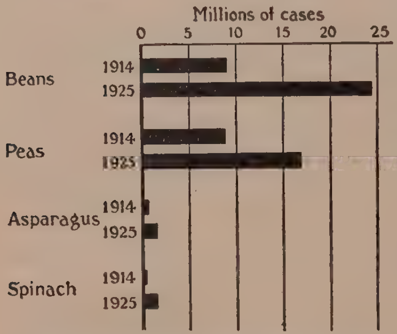
[6] Cf. *Are Wages Too High?* by Basil M. Manly, published by the People's Legislative Service, Washington, 1922.

9. *Changes in Diet and the Costs Involved*

One of the important considerations in determining the level at which Americans live is the kind and quality of the foods they use. In this field there have been important changes in recent years. In our later chapters on consumption we shall refer to these again; but here we may well note that there has been the kind of shifting which would indicate an increase of well-being. More high-priced foods are used and are used in more expensive ways. Problems are raised by this shifting, such as the increased cost of intermediate handling, which at this point we can only suggest. We shall return to them later. Perhaps the best summary of this situation is to be found in *Recent Economic Changes in the United States.*[7] The point is made that our food requirements as a nation have been reduced by the shift from outdoor to indoor work, by the newer knowledge of nutrition, and the feminine desire to remain slender, as well as by other causes. Also it is possible to say that the present diet is more highly diversified than it has ever been before. "Staples play a smaller part, and even they are available in more varied forms. A larger variety of foods is used, and increasing quantities of former rarities. Especially notable has been the increased use of a great range of fresh fruits and vegetables. . . . Foods formerly limited to the well-to-do have come more and more within reach of the masses."



This chart shows the impressive increase, in a decade, of the use of green vegetables in cans. The improvement in the arts of preserving foods, and the progressive cheapening of processes have made such foods available to the whole population with immensely beneficial results to the general health. (Data from *Survey of Current Business.*)

> From a nutritional standpoint diversification of the diet represents a gain, primarily because, without sacrificing the provision for intake of proteins, it tends to insure and stabilize the intake of vitamins, mineral salts, alkaline elements and roughage. There is no longer serious danger of shortage in these essentials of the diet, in any class of the population, except as ignorance or carelessness may be the cause; and such choices of foods are available that the diet selected without thought on these matters is more likely, nowadays, to be adequate in these respects. Furthermore, the adaptation of the diet to different nutritional needs of different members of a family, at different seasons, and under different circumstances, has been rendered easier.
>
> The direct tendency of the diversification of the diet is probably toward complicating the provision, serving, and care of food. More things are ordered or purchased from more places. More articles of different kinds are kept in pantry and

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[7] At p. 49.

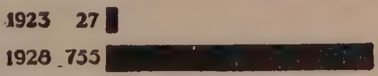
storage shelves. More operations, utensils, and dishes are involved than with simpler diets. More left-overs are to be disposed of. An increase in household labor from these causes has partially offset the saving through heavier purchase of foods in smaller units and ready-to-serve or partially prepared, far better culinary equipment, and smaller, better-planned kitchens.

There is doubtless some reservation to be made to so broad a pronouncement as that "there is no longer serious danger of shortage in these essentials of the diet, in any class of the population. . . ." We know that there are still many who actually go hungry and even more who suffer from an insidious, forced malnutrition. But there is no question of this for those who exist at or above what we have defined roughly as the comfort level. For these fortunate families and individuals the diet has changed for the better. It has not become cheaper; in fact it is more expensive. This is partly because we can afford it and have substituted expensive foods for cheap ones, but partly also for other reasons:

> Each year sees a decline in the contribution of home gardens and fruit trees to the family table, as the proportion of urban and apartment house dwellers increases, and as land becomes more expensive in towns and rural areas adjacent to cities. Increasing concentration of population in cities inevitably makes for higher terminal costs, and necessitates drawing supplies from more distant sources. The increasing geographical specialization in production necessitates longer hauls and costly care in preservation of perishables. Public regulation and private practices that have brought about improvement in quality of foodstuffs have also entailed substantial increments of cost. It is probable that expensive competitive advertising which has been resorted to both in order to break down inertia of consumers and to expand the market for less stable products of many kinds, and in order to check the decline in consumption of staples, such as bread and meat, is partly reflected in higher food costs. In the main, the increased intermediate costs have been especially pronounced in those articles in the diet of which the consumption has increased the most.

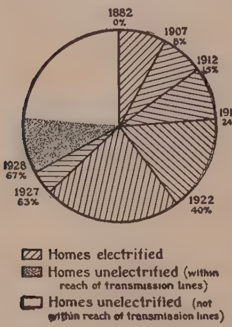
10. *Some Changes in Our Use of Manufactured Goods*

Throughout the whole population of America great changes have taken place, changes which are still continuing, in the use of goods. These shifts are of such a sort, also, that they affect significantly the kind of life which is led. Just as we have seen that a new kind of diet is being adopted, so other new habits of consumption are developing. Our dependence on machinery and the power which moves machines is notable not only in factories and on farms (as we shall presently see) but in the home, and in the other usual places of living. Whether this change is for better or for worse, a subject which is bitterly argued, the thing is unquestionably happening. There



Thousands of electric refrigerators in use. (Data from *Recent Economic Changes.*)

are those who deplore the increasing mechanization of life, saying that the all-prevalent machine seems likely to make robots of all of us; and there are those who say that our machines possess the likelihood of freeing us from drudgery and so enabling us to live more freely and happily than we have ever done before. Some contend that we must return to the pattern of the old country life where activities were varied and the family group was comparatively independent. Others look forward to an even more highly socialized and coöperative future in which each of us is highly specialized and dependent on others for their specialized goods and services. However each of us may settle this argument for himself concerning the desirable future, it is necessary as a preliminary to understand what is going on at present.[8]



As can be seen here, 67 per cent of American homes were "electrified" by 1928. Of the rest about two-thirds were beyond the reach of transmission lines. (Adapted from *The Electrical World*, January 1, 1929.)

It is among those who live at the comfort level that we see these modern tendencies in their most highly intensified form. The very rich can afford a country-house life of independence, the very poor must of necessity be shut out from access to many new kinds of things. The middle group can have them; and, in a sense, is unable to escape from them. But let us particularize. The output of electrical household appliances which is estimated to have had a total value in 1914 of less than $3,500,000 had, by 1925 increased to the value of over $75,000,000 with a slight drop to $72,000,000 in 1927.[9] The number of electric washing machines sold in 1923 was 718,429; the number sold in 1927 was 944,506. Nearly 4,500,000 were sold in these five years—an impressive figure when we remember that there are approximately twenty-six million families in the United States. Estimates place the number of electric refrigerators sold in 1927 at 365,000. The number of radio sets in use has grown from some 60,000 in 1922 to 4,000,000 in 1925 and 7,500,000 in 1928. Consider also the automobile. The registration figures since 1919 run as follows:

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[8] It would be interesting for the student at this point to examine some recent literature in which the discussion of these problems is prominent. *This Ugly Civilization* (1929) by Mr. Ralph Borsodi, for instance roundly condemns our present arrangements and suggests the rebuilding of independent homestead life through the domestication of household machinery. And two Frenchmen, Messrs. Dubreuil, and Siegfried, have recently written books (*Robots or Men*, 1930 and *America Comes of Age*, 1927) examining the results of our civilization from the point of view of representatives of an older and more settled culture. Each in its way is an excellent critique and well worth examining. Mr. Dubreuil is a French workman, Mr. Siegfried is a Professor in the *College de France*.

[9] Data for these statements may be found at pp. 56 ff. of *Recent Economic Changes in the United States*.

AUTOMOBILE REGISTRATIONS [10]

YEAR	PASSENGER CARS	TRUCKS
1919	6,771,074	794,372
1920	8,225,859	1,006,082
1921	9,346,195	1,118,520
1922	10,864,128	1,375,725
1923	13,479,608	1,612,569
1924	15,460,649	2,134,724
1925	17,512,638	2,441,709
1926	19,237,171	2,764,222
1927	20,230,429	2,896,886
1928	21,630,000	3,120,000

The following table shows the change which has taken place in the use of sanitary equipment—sometimes spoken of by foreigners as a distinguishing feature of American civilization.

NUMBER OF SANITARY BATHTUBS, TELEPHONES, AND WIRED HOMES COMPARED WITH TOTAL NONFARM POPULATION, 1913–1928 [11]

		HOMES EQUIPPED WITH STATIONARY BATHTUBS		RESIDENCE TELEPHONES BELL SYSTEM		WIRED HOMES (DOMESTIC ELECTRIC LIGHT AND POWER CUSTOMERS)	
Year (Jan. 1)	Estimated Nonfarm Population	Total Number	Number per Thousand Nonfarm Population	Total Number	Number per Thousand Nonfarm Population	Total Number	Number per Thousand Nonfarm Population
	Thousands	*Thousands*		*Thousands*		*Thousands*	
1913	64,545	7,066	109.5	2,800	43.4	3,101	48.0
1914	66,534	7,520	113.0	3,050	45.8	.....	....
1915	68,021	8,004	117.7	3,275	48.1	.....	....
1916	69,376	8,540	123.1	3,500	50.4	.....	....
1917	70,941	9,123	128.6	3,864	54.5	5,260	74.1
1918	72,223	9,501	131.6	4,148	57.4	5,800	80.3
1919	72,905	9,722	133.4	4,228	58.0	6,900	94.6
1920	74,097	10,116	136.5	4,545	61.3	8,010	108.1
1921	75,832	10,702	141.1	4,903	64.7	8,700	114.7
1922	77,615	11,175	144.0	5,260	67.8	9,430	121.5
1923	79,238	12,028	151.8	5,653	71.3	10,211	128.9
1924	81,316	13,059	160.6	6,230	76.6	11,819	145.3
1925	83,055	14,150	170.4	6,798	81.8	13,567	163.3
1926	84,704	15,410	181.9	7,306	86.3	14,965	176.7
1927	86,297	16,545	191.7	7,875	91.3	16,359	189.6
1928	87,910	17,591	200.1	8,333	94.8	17,596	200.2

The significance of this is made clearer by observing that 68.3 of our urban homes had stationary bathtubs in 1925. Their installation at that time was going on at the rate of 1,100,000 per year. Something also can be learned of our standards by studying the consumption of water. The following table shows this as compared with certain European cities:

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[10] *Ibid.*, p. 59.

[11] *Ibid.*, p. 67.

DAILY PER CAPITA WATER CONSUMPTION, IN SELECTED AMERICAN AND EUROPEAN CITIES[12]

Country and City	Year	Per Capita Daily Consumption of Water
		U. S. Gallons
Germany:		
Berlin	1927	37.8
Hamburg	1927	37.0
England:		
London	1927	43.4
Manchester	1927	42.3
France:		
Paris	1927	47.2
Holland:		
Amsterdam	1926	30.0
Rotterdam	1926	35.0
United States:		
Baltimore	1927	129.0
Chicago	1927	292.8
Cleveland	1927	127.9
Detroit	1927	126.0
New York	1927	142.0
Philadelphia	1927	168.0

All this, as we have said, can be taken to mean that we are living at a higher level of enjoyment—or, at least, that our growing comfort class is living so—than ever before or than any other people at present. Or it can be taken to mean that a drab sameness, traceable to mechanization and mass consumption, is invading every department of life. As to this, each of us is permitted his own opinion. To the writers, as has been intimated, it means neither the one nor the other, inevitably. The race has always been faced with definite conditions and possibilities to be made of what we care to or can. These new services and goods offer a vast chance of betterment in enjoyment and creativeness. Whether that is the use we shall make of them no one can yet say.

10. *Emulation of the Rich*

We may imagine a typical family on the comfort level as occupying an apartment in the city of some two to ten rooms, according to its size and income, or, in town or suburb, a small house and garden. If it is like most families, it is anxious that the house or apartment be as near as possible to the streets where the rich and fashionable live and that its appearance and furnishing, inside and out, resemble theirs. Of course such things are partly desired for their own sake, not only to keep up appearances: motives of valuation are too complex and variable to be grouped under any single formula. But it is substantially true that the desires of people on any level are inspired in large part by observing the possessions and enjoyments of the more fortunate. Among these possessions not the least attractive are the respect of others, and a certain easy self-confidence which goes with assured financial and social position. Ways of living on the comfort level are therefore considerably influenced by the desire to appear like the rich, and to command the respect which they do, as well as by the intrinsic attractiveness of their goods and activities. Whether or not we feel this motive to be a worthy one, we must reckon with it as a psychological and economic fact. It is intangible and hard to measure, but undeniably operative in influencing both the ways people spend money and the ways they earn it.

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[12] *Ibid.*, p. 69.

Possessions go far to create a social rating for the family in places where distinctions of birth are few and precarious. For this reason a family on the comfort level will often sacrifice much—perhaps even mortgage its house—to possess an automobile of respected make, not only because it enjoys riding, but because a wealthier neighbor has one. Its members will be fashionably dressed, in expensive fabrics, in styles imagined to be imitative of those approved by London tailors and Parisian dressmakers, and its women will carry as many jewels as is consistent with their purses and the prevailing standards of good form.

In larger cities, the desire to keep up appearances is on the whole less keen, because of the city's great impersonality; in the constantly shifting crowds demarcations of social groups and the comparative standards of their members are less sharp and conspicuous. Private automobiles, large houses, and entertainment in them are not so necessary. But there is always present the desire to move into a larger, better located, and better furnished apartment, and to enjoy more of the city's expensive amusements: its operas, theaters, and brilliant restaurants.

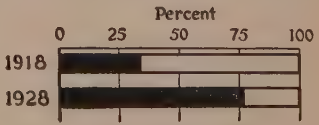
11. *Town and Suburban Amusements*

In a town of smaller size, there are sure to be attempts at stratification into social classes—a banding together of the older residents, who have possessed their incomes longer. Newcomers, and families who have but lately risen to prosperity, may be admitted reluctantly on rather vague qualifications, a compound, perhaps, of money, generosity in entertaining, good manners, and personal amiability. A nucleus of families who have so qualified usually form, sooner or later, some sort of country club, which becomes the chief center of social life. A few years ago, this function was exercised by the local church, where members lingered to talk after service, and where picnics and social evenings were arranged. These still persist, but they are being overshadowed by the more urbane festivities of the country club, where there is less restraint in the atmosphere and more facility for excluding undesired associates. There will be frequent dances for the younger set, convivial poker parties for the married men, and bridge for their wives. Tennis courts and golf links adjoining the club, or a garden plot around the adjacent homes, provide relaxation from the stresses of the productive life. At times exclusiveness will be forgotten, and the whole town go out to cheer its local baseball team, or flock to the moving-picture theater when a popular star is advertised, stopping afterwards at the corner drug store for an ice-cream soda and an hour of friendly conversation. Occasional visits of a barn storming theatrical troupe or in the summer a traveling Chautauqua vary the round of amusements. Some group of residents, perhaps a women's club, usually attempts to raise the town's intellectual level by obtaining concerts and lectures of a higher order, by providing a library, and organizing a book-study club.

A country club. One of the leading social centers for members of the comfort group. (© Ewing Galloway.)

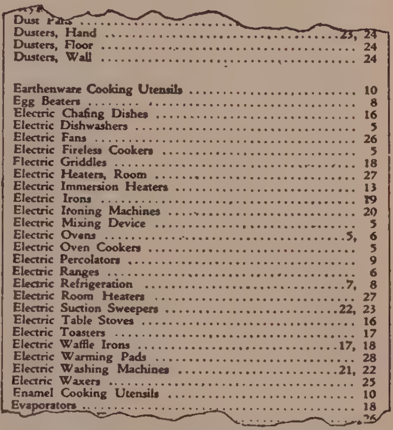
12. *Women's Work*

The activities of women on the intermediate level are increasingly uncertain and changing in present-day society. The wife of today is somewhat perplexed to find worthy activities. The duties which occupied her grandmother's day are mostly done for her. Sewing is only a pastime, for the clothes of the family can be bought ready-made, or made to order, better and more cheaply than she could make them. Sweeping and cleaning are reduced to a minimum by small apartments and labor-saving devices. Heating and lighting are attended to by janitors, or by municipal utility corporations. Even cooking is a shorter task, for most of the articles come to her nearly ready for the table, or entirely so, in tins and sealed boxes. To a constantly greater extent she can rely upon the near-by restaurant, caterer,



The per cent of total apartments in newly erected apartment houses and tenements in New York City having less than four rooms. (Data from the *N. Y. Times*, March 10, 1929.)

or delicatessen store for well-cooked meals at small cost. Her children are taken away for most of the day to school, where the work of training their minds and habits is intrusted to specialists; and after school they are quickly got off to a playground or moving-picture theater. A woman of the poorer class must continue to do some of these tasks herself, and if there is time also go out and earn money to supplement an always meager income. But the fairly prosperous husband is more than ready to spare his wife every task, not only from affection but as a mark of his own financial success. So she is left with steadily increasing leisure, and, in the absence of customs and traditions for guides, with no clear ideas concerning what to do with it. Among women's clubs and in formal groups are to be found, naturally, both idle gossip and movements for civil and intellectual advance.



Dust Pans	
Dusters, Hand	23, 24
Dusters, Floor	24
Dusters, Wall	24
Earthenware Cooking Utensils	10
Egg Beaters	8
Electric Chafing Dishes	16
Electric Dishwashers	5
Electric Fans	26
Electric Fireless Cookers	5
Electric Griddles	18
Electric Heaters, Room	27
Electric Immersion Heaters	13
Electric Irons	19
Electric Ironing Machines	20
Electric Mixing Device	5
Electric Ovens	5, 6
Electric Oven Cookers	5
Electric Percolators	9
Electric Ranges	6
Electric Refrigeration	7, 8
Electric Room Heaters	27
Electric Suction Sweepers	22, 23
Electric Table Stoves	16
Electric Toasters	17
Electric Waffle Irons	17, 18
Electric Warming Pads	28
Electric Washing Machines	21, 22
Electric Waxers	25
Enamel Cooking Utensils	10
Evaporators	18

A popular housekeeping magazine sponsors this list of dependable electric household aids. (Courtesy—Good Housekeeping Institute.)

Every year greater numbers of women are entering occupations formerly confined to men, and new careers are being opened up to them: not only in teaching, acting, and subordinate business positions, where they have long been active, but in law, medicine, and executive business capacities, the number of women is rapidly increasing. They are among our most successful novelists, poets, painters, and musicians. We have hardly begun to realize the problems to which this tendency gives rise: problems not only of the future of home and family, but of a nature that affects industrial technology. Women everywhere are asking for equal pay for equal work; they demand to be received on equal competitive conditions with men, although many favor regulations protecting them from too severe competition.

13. *Men's Work; the Struggle to Keep up a Standard*

The occupations of men on this financial plane are of course limitless in variety; we need not stop to consider any of them specifically. These are the men who direct the army of manual laborers, and are themselves directed by men of greater wealth and superior industrial position: the skilled craftsmen, small administrators and shopkeepers, professional men, technicians, scientists, artists, writers, some of them parts of the industrial machine, and some free lances who are more or less outside it. In these occupations are to be found every degree of scope for originality and development: an outlet for every human capacity. But it must not be supposed that attainment of the comfort level is a guarantee of economic and intellectual freedom, that economic progress would reach its limit if every one were brought up to this level. The struggle to "make ends meet" does not cease when a family rises out of the poverty class; often it is intensified. Desires and ambitions increase more rapidly than income. Things seem necessities which before were luxuries, for it is a human characteristic to fight stubbornly for the preservation of a standard of living once attained. As a family comes nearer to the level of affluence, its members become more and more conscious of small differences between its standard and their own.

So, inability to give his son a college education may be, to a professional man, a keener disappointment than a day laborer would suffer if his son had to go without any schooling at all. To a business man success or failure in life, with all its consequent self-respect or shame, depends on doing as well financially as he has been expected to do: on keeping up with those who were his equals in college, on being able to buy for his wife the luxuries her friends enjoy and on being able to maintain all the trivial but costly appurtenances of the group. Thus the desire to keep up a standard—in goods and appearances if not in character and intellect—impels many men to sacrifice their most precious ambitions and to enter upon careers which promise greater money-making chances. There they will work with anxious intensity until senility overtakes them, their youthful dreams forgotten, never satisfied with moderate wealth. And, if financial reverses come, they are plunged into a despair that often finds no other release than suicide.

Obviously these are two ways of avoiding such unhappiness: either to get more wealth or to be satisfied with less, and to use that less more effectively. The second, perhaps the more important, is a matter for ethical consideration, through the attainment of a rational estimate of the values of life; it forms the background of our consideration of the problems of consumption later on. But much can be done along the first line as well, and it is a special task of ours to consider in this book the ways in which material means to happiness may be made more available for all.

14. *Obstacles to Growth*

It must not be supposed, furthermore, that work on the comfort level offers all the opportunities for mental development which, conceivably, it might. Even the men who seem to be devoting their lives most purely to creation in art and science are usually hampered at every turn by economic difficulties. The finest developments of civilization are often the easiest to get along without. They fail, in competition for financial support, against the appeal of better food and clothing, or even tawdry luxuries. If the artist would enjoy the comforts of life, the means to his own leisure and education, he may be forced to sacrifice sincerity and his highest ideals, to secure the favor of an ignorant patron, a commercial enterprise, or a capricious public. It is a part of economic progress to arrange, therefore, for the free development of culture: shall it be on a competitive level, or subsidized by society; and if it is to be supported, how and to what extent shall it be done? These are questions to which there is no obvious or easy answer and none can be attempted here; but certainly the finest flower of civilization ought not to be forced into competition with its rank weeds just because of their hardier growth.

In professional work, and still more so in industry, intellectual and æsthetic abilities are apt to be slowly smothered by the way in which work is carried on—doubtless less inevitably than on the poverty level, but still with too great frequency. Some parts of our industrial system—for instance retail trading—are still largely disorganized and individualistic. There are few rules of the game, and wealth goes to the survivor of a ruthless, catch-as-catch-can struggle. Such struggle develops, it is true, certain qualities valuable to society and the man himself: shrewd clear-headedness, energy, resourcefulness. Modern civilization perhaps owes something to the bitter competition of the past. But it is distinctively not favorable to certain other good qualities, to refinement of emotion and abstract thought, to a spirit of unselfish good will toward society in general. It is an insatiable devourer of a man's time and energy, forcing him to give up one by one the humane interests of his youth and to risk all his resources in the battle for power and money.

A musician in his studio—genius is not always permitted such favorable surroundings. (Photo Hine.)

Where industry is highly organized, as it is in rapidly increasing areas, a new set of dangers arises. Not only is there still keen rivalry for advancement on the basis of qualities which may not always be morally best; but such industry tends to be mechanized, reduced to exactly repetitive ways of doing things. "Red tape" is sometimes thought of as existing only in government work; in reality it follows upon the mechanization of tasks anywhere. Originality in subordinates is less to be desired than faithful performance of a set task and endurance in sticking to a tedious routine job. For the clerk, accountant, department manager, hardly less than for the manual laborer, work is becoming specialized, cut-and-dried, monotonous. This has its merits, as we shall see, in increasing society's productive efficiency, but it is not educative, in a large sense, to the individual. Real economic progress, therefore, must find some way to combat the deadening influence of industrial routine, either through controlling methods of work or through increasing opportunities for productive leisure, or through both.[13]

15. *Babbitt: A Picture of Urban Comfort-Level Life*

Mr. Sinclair Lewis has written the epic of comfort life in urban America. In *Babbitt* [14] he does not fail to dwell upon the possibilities that are inherent in the comfort income; but he bears down rather hard upon the raw newness of the culture which comfort incomes have so far developed in America. His Zenith is a typical small-large industrial and trading city; George F. Babbitt, one of its typical comfort-level citizens. As good a picture of the advantages as well as the rawness of our Babbitts is drawn there as could be constructed. Following are certain passages from the book that are germane to our discussion of this area of life:

> Though the house was not large it had, like all houses on Floral Heights, an altogether royal bathroom of porcelain and glazed tile and metal sleek as silver. The towel-rack was a rod of clear glass set in nickel. The tub was long enough for a Prussian Guard, and above the set bowl was a sensational exhibit of toothbrush holder, shaving-brush holder, soap-dish, sponge-dish, and medicine-cabinet, so glittering and so ingenious that they resembled an electrical instrument-board. . . .
>
> The [bed] room displayed a modest and pleasant color-scheme, after one of the best standard designs of the decorator who "did the interiors" for most of the speculative-builders' houses in Zenith. The walls were gray, the woodwork white, the rug a serene blue; and very much like mahogany was the furniture—the bureau with its great clear mirror, Mrs. Babbitt's dressing-table with toilet-articles of almost solid silver, the plain twin beds, between them a small table holding a standard bedside book with colored illustrations—what particular book it was cannot be ascertained, since no one had ever opened it. The mattresses were firm but not hard, triumphant modern mattresses which had cost a great deal of money; the hot-water radiator was of exactly the proper scientific surface for the cubic contents of the room. The windows were large and easily opened, with the best catches and cords, and Holland roller-shades guaranteed not to crack. It was

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[13] These matters are again discussed in other chapters devoted to ways of improving the working life.

[14] Harcourt, Brace and Company, 1922. The following quotations are used by permission.

a masterpiece among bedrooms, right out of Cheerful Modern Houses for Medium Incomes. . . .

The Babbitts' house was five years old. It was all as competent and glossy as this bedroom. It had the best of taste, the best of inexpensive rugs, a simple and laudable architecture, and the latest conveniences. Throughout, electricity took the place of candles and slatternly hearth-fires. Along the bedroom baseboard were three plugs for electric lamps, concealed by little brass doors. In the halls were plugs for the vacuum cleaner, and in the living-room plugs for the piano lamp, for the electric fan. The trim dining-room (with its admirable oak buffet, its leaded-glass cupboard, its creamy plaster walls, its modest scene of a salmon expiring upon a pile of oysters) had plugs which supplied the electric percolator and the electric toaster. . . .

To George F. Babbitt, as to most prosperous citizens of Zenith, his motor car was poetry and tragedy, love and heroism. The office was his pirate ship but the car his perilous excursion ashore.

Among the tremendous crises of each day none was more dramatic than starting the engine. It was slow on cold mornings; there was the long, anxious whir of the starter; and sometimes he had to drip ether into the cocks of the cylinders, which was so very interesting that at lunch he would chronicle it drop by drop, and orally calculate how much each drop had cost him.

This morning he was darkly prepared to find something wrong, and he felt belittled when the mixture exploded sweet and strong, and the car didn't even brush the door-jamb, gouged and splintery with many bruisings by fenders, as he backed out of the garage. He was confused. He shouted "Morning!" to Sam Doppelbrau with more cordiality than he had intended.

Babbitt's green and white Dutch Colonial house was one of three in that block on Chatham Road. To the left of it was the residence of Mr. Samuel Doppelbrau, secretary of an excellent firm of bathroom-fixture jobbers. His was a comfortable house with no architectural manners whatever; a large wooden box with a squat tower, a broad porch, and glossy paint yellow as a yolk. Babbitt disapproved of Mr. and Mrs. Doppelbrau as "Bohemian." From their house came midnight music and obscene laughter; there were neighborhood rumors of bootlegged whisky and fast motor rides. They furnished Babbitt with many happy evenings of discussion, during which he announced firmly, "I'm not strait-laced, and I don't mind seeing a fellow throw in a drink once in a while, but when it comes to deliberately trying to get away with a lot of hell-raising all the while like the Doppelbraus do, it's too rich for my blood!"

On the other side of Babbitt lived Howard Littlefield, Ph.D., in a strictly modern house whereof the lower part was dark red tapestry brick, with a leaded oriel, the upper part of pale stucco like spattered clay, and the roof red-tiled. Littlefield was the Great Scholar of the neighborhood; the authority on everything in the world except babies, cooking, and motors. He was a Bachelor of Arts of Blodgett College, and a Doctor of Philosophy in economics of Yale. He was the employment-manager and publicity-counsel of the Zenith Street Traction Company. He could, on ten hours' notice, appear before the board of aldermen or the state legislature and prove, absolutely, with figures all in rows and with precedents from Poland and New Zealand, that the street-car company loved the Public and yearned over its employees; that all its stock was owned by Widows and Orphans;

and that whatever it desired to do would benefit property-owners by increasing rental values, and help the poor by lowering rents. All his acquaintances turned to Littlefield when they desired to know the date of the battle of Saragossa, the definition of the word "sabotage," the future of the German mark, the translation of "hinc illæ lacrimæ," or the number of products of coal tar. He awed Babbitt by confessing that he often sat up till midnight reading the figures and footnotes in Government reports, or skimming (with amusement at the authors' mistakes) the latest volumes of chemistry, archeology, and ichthyology. . . .

A stranger suddenly dropped into the business-center of Zenith could not have told whether he was in a city of Oregon or Georgia. Ohio or Maine, Oklahoma or Manitoba. But to Babbitt every inch was individual and stirring. As always he noted that the California Building across the way was three stories lower, therefore three stories less beautiful, than his own Reeves Building. As always when he passed the Parthenon Shoe Shine Parlor, a one-story hut which beside the granite and red-brick ponderousness of the old California Building resembled a bath-house under a cliff, he commented, "Gosh, ought to get my shoes shined this afternoon. Keep forgetting it." At the Simplex Office Furniture Shop, the National Cash Register Agency, he yearned for a dictaphone, for a typewriter which would add and multiply, as a poet yearns for quartos or a physician for radium.

At the Nobby Men's Wear Shop he took his left hand off the steering-wheel to touch his scarf, and thought well of himself as one who bought expensive ties "and could pay cash for 'em, too, by golly"; and at the United Cigar Store, with its crimson and gold alertness, he reflected, "Wonder if I need some cigars—idiot—plumb forgot—going t' cut down my fool smoking." He looked at his bank, the Miners' and Drovers' National, and considered how clever and solid he was to bank with so marbled an establishment. His high moment came in the clash of traffic when he was halted at the corner beneath the lofty Second National Tower. His car was banked with four others in a line of steel restless as cavalry, while the cross-town traffic, limousines and enormous moving-vans and insistent motor-cycles, poured by; on the farther corner, pneumatic riveters rang on the sun-plated skeleton of a new building; and out of this tornado flashed the inspiration of a familiar face, and a fellow Booster shouted, "H' are you, George!" Babbitt waved in neighborly affection, and slid on with the traffic as the policeman lifted his hand. He noted how quickly his car picked up. He felt superior and powerful, like a shuttle of polished steel darting in a vast machine.

As always he ignored the next two blocks, decayed blocks not yet reclaimed from the grime and shabbiness of the Zenith of 1885. While he was passing the five-and-ten-cent store, the Dakota Lodging House, Concordia Hall with its lodge-rooms and the offices of fortune-tellers and chiropractors, he thought of how much money he made, and he boasted a little and worried a little and did old familiar sums:

"Four hundred fifty plunks this morning from the Lyte deal. But taxes due. Let's see: I ought to pull out eight thousand net this year, and save fifteen hundred of that—no, not if I put up garage and— Let's see: six hundred and forty clear last month, and twelve times six-forty makes—makes—let's see: six times twelve is seventy-two hundred and—Oh, rats, anyway, I'll make eight thousand—gee, now, that's not so bad; mighty few fellows pulling down eight thousand dollars a year—eight thousand good hard iron dollars—bet there isn't more than five per cent of the people in the whole United States that make more than Uncle George does, by golly! Right up at the top of the heap! But— Way expenses are— Family wasting gasoline, and always dressed like millionaires, and sending that eighty a month to Mother— And all these stenographers and salesmen gouging me for every cent they can get—"

The effect of his scientific budget-planning was that he felt at once triumphantly wealthy and perilously poor, and in the midst of these dissertations he stopped his car, rushed into a small news-and-miscellany shop, and bought the electric cigar-lighter which he had coveted for a week. He dodged his conscience by being jerky and noisy, and by shouting at the clerk, "Guess this will prett' near pay for itself in matches, eh?"

It was a pretty thing, a nickeled cylinder with an almost silvery socket, to be attached to the dashboard of his car. It was not only, as the placard on the counter observed, "a dandy little refinement, lending the last touch of class to a gentleman's auto," but a priceless time-saver. By freeing him from halting the car to light a match, it would in a month or two easily save ten minutes.

As he drove on he glanced at it. "Pretty nice. Always wanted one," he said wistfully. "The one thing a smoker needs, too." . . .

The Zenith Athletic Club is not athletic and it isn't exactly a club, but it is Zenith in perfection. It has an active and smoke-misted billiard room, it is represented by baseball and football teams, and in the pool and the gymnasium a tenth of the members sporadically try to reduce. But most of its three thousand members use it as a café in which to lunch, play cards, tell stories, meet customers, and entertain out-of-town uncles at dinner. It is the largest club in the city, and its chief hatred is the conservative Union Club, which all sound members of the Athletic call "a rotten, snobbish, dull, expensive old hole—not one Good Mixer in the place—you couldn't hire me to join." Statistics show that no member of the Athletic has ever refused election to the Union, and of those who are elected, sixty-seven per cent resign from the Athletic and are thereafter heard to say, in the drowsy sanctity of the Union lounge, "The Athletic would be a pretty good hotel, if it were more exclusive."

The Athletic Club building is nine stories high, yellow brick with glassy roof-garden above and portico of huge limestone columns below. The lobby, with its thick pillars of porous Caen stone, its pointed vaulting, and a brown glazed-tile floor like well-baked bread-crust, is a combination of cathedral crypt and rathskeller. The members rush into the lobby as though they were shopping and hadn't much time for it. Thus did Babbitt enter, and to the group standing by the cigar-counter he whooped, "How's the boys? How's the boys? Well, well, fine day!" . . . .

The entrance lobby of the Athletic Club was Gothic, the washroom Roman Imperial, the lounge Spanish Mission, and the reading-room in Chinese Chippendale, but the gem of the club was the dining-room, the masterpiece of Ferdinand Reitman, Zenith's busiest architect. It was lofty and half-timbered, with Tudor leaded casements, an oriel, a somewhat musicianless musicians' gallery, and tapestries believed to illustrate the granting of Magna Charta. The open beams had been hand-adzed at Jake Offutt's car-body works, the hinges were of hand-wrought iron, the wainscot studded with handmade wooden pegs, and at one end of the room was a heraldic and hooded stone fireplace which the club's advertising-pamphlet asserted to be not only larger than any of the fireplaces in European castles but of a draught incomparably more scientific. It was also much cleaner, as no fire had ever been built in it. . . .

Chum Frink had recently been on a lecture-tour among the small towns, and he chuckled, "Awful good to get back to civilization! I certainly been seeing some hick towns! I mean—Course the folks there are the best on earth, but, gee whiz, those Main Street burgs are slow, and you fellows can't hardly appreciate what it means to be here with a bunch of live ones!"

"You bet!" exulted Orville Jones. "They're the best folks on earth, those small-town folks, but, oh, mama! what conversation! Why, say, they can't talk about anything but the weather and the ne-oo Ford, by heckalorum!"

"That's right. They all talk about just the same things," said Eddie Swanson.

"Don't they, though! They just say the same things over and over," said Vergil Gunch.

"Yes, it's really remarkable. They seem to lack all power of looking at things impersonally. They simply go over and over the same talk about Fords and the weather and so on," said Howard Littlefield.

"Still, at that, you can't blame 'em. They haven't got any intellectual stimulus such as you get up here in the city," said Chum Frink.

"Gosh, that's right," said Babbitt. "I don't want you highbrows to get stuck on yourselves but I must say it keeps a fellow right up on his toes to set in with a poet and with Howard, the guy that put the con in economics! But these small-town boobs, with nobody but each other to talk to, no wonder they get so sloppy and uncultured in their speech, and so balled-up in their thinking!"

Orville Jones commented, "And, then take our other advantages—the movies, frinstance. These Yapville sports think they're all-get-out if they have one change of bill a week, where here in the city you got your choice of a dozen diff'rent movies any evening you want to name!"

"Sure, and the inspiration we get from rubbing up against high-class hustlers every day and getting jam full of ginger," said Eddie Swanson.

"Same time," said Babbitt, "no sense excusing these rube burgs too easy. Fellow's own fault if he doesn't show the initiative to up and beat it to the city, like we done—did. And, just speaking in confidence among friends, they're jealous as the devil of a city man. Every time I go up to Catawba I have to go around apologizing to the fellows I was brought up with because I've more or less succeeded and they haven't. And if you talk natural to 'em, way we do here, and show finesse and what you might call a broad point of view, why, they think you're putting on side. There's my own half-brother Martin—runs the little ole general store my Dad used to keep. Say, I'll bet he don't know there is such a thing as a Tux—as a dinner-jacket. If he was to come in here now, he'd think we were a bunch of—of— Why, gosh, I swear he wouldn't know what to think! Yes, sir, they're jealous!"

Chum Frink agreed, "That's so. But what I mind is their lack of culture and appreciation of the Beautiful—if you'll excuse me for being highbrow. Now, I like to give a high-class lecture, and read some of my best poetry—not the newspaper stuff but the magazine things. But say, when I get out in the tall grass, there's nothing will take but a lot of cheesy old stories and slang and junk that if any of us were to indulge in it here, he'd get the gate so fast it would make his head swim."

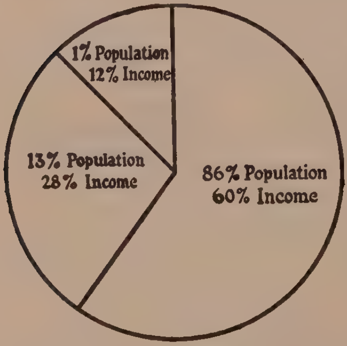
Vergil Gunch summed it up: "Fact is, we're mighty lucky to be living among a bunch of city-folks, that recognize artistic things and business-punch equally. We'd feel pretty glum if we got stuck in some Main Street burg and tried to wise up the old codgers to the kind of life we're used to here. But, by golly, there's this you got to say for 'em: Every small American town is trying to get population and modern ideals. And darn if a lot of 'em don't put it across! Somebody starts panning a rube crossroads, telling how he was there in 1900 and it consisted of one muddy street, count 'em, one, and nine hundred human clams. Well, you go back there in 1920, and you find pavements and a swell little hotel and a first-class ladies' ready-to-wear shop—real perfection, in fact! You don't want to just look at what these small towns are, you want to look at what they're aiming to become, and they all got an ambition that in the long run is going to make 'em the finest spots on earth—they all want to be just like Zenith!"

CHAPTER 8

RICHES

1. *The Favored Few*

There is of course no way of deciding just where on the scale comfort passes over into riches; and accordingly no way of telling how many rich people there are in the United States. But, once more, if we choose some round figure as representing the minimum income for this standard, it is easy to find how many people come up to or surpass it. In 1918 only three per cent of the total number of incomes in this country were estimated as amounting to $5,000 or above.[1] But within that three per cent were many enormous incomes, so that this small proportion of families enjoyed a considerable share of the national income.



The part of our income that goes to the poor, the comfortable, and the rich. This chart shows that though only 1 per cent of our people receive incomes of $10,000 or more (as was shown in a previous chart), this 1 per cent gets 12 per cent of the income. The 13 per cent whose incomes range from $2000 to $10,000 get 28 per cent of the income. And the receivers of incomes of less than $2000—86 per cent—get altogether only 60 per cent of the income. There is considerable inequality in the sharing of goods in our country. (Based on official statistics, U. S. Bureau of Internal Revenue, 1918.)

In 1922 four persons (as against one in 1921 and four in 1920) had a taxable income of $5,000,000 or over; their incomes amounted altogether to over forty-five millions. Five persons had incomes of three to four million; ten had incomes of two to three million; eleven had incomes of one and a half to two million; thirty-seven had incomes of one to one and a half million; thirty-nine had incomes of $750,000 to $1,000,000. Sixty-seven had incomes of $1,000,000 or over. Out of nearly seven million incomes taxed, about six hundred thousand were $5,000 or over; about two hundred thousand were $10,000 or over. Estimating thirty-eight millions as the total number of incomes in the United States (including those not taxed), we find that less than two per cent of the incomes were taxed as $5,000 or over; about half of one per cent as $10,000 or over. In 1926 and the years immediately preceding, the wealthiest 10 per cent of the population received just over 32 per cent of the national money income.[2]

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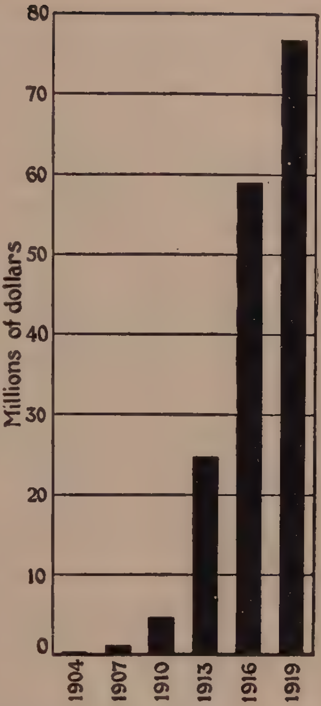
[1] *Income in the U. S.*, p. 136.

[2] *Recent Economic Changes in the United States*, p. 836.

Whatever else is to be inferred from these figures, it is at least clear that the proportion of even moderately wealthy persons in the United States is a very small one, and that a relatively small number of families enjoy incomes of overwhelming magnitude.

2. *Sources of Large Incomes*

Few men of large income receive it entirely in one form. It is a safer policy not to keep all one's eggs in one basket, so a person with larger funds to invest will usually place them in several different enterprises. His stocks, unless he wishes to exert an influence on some one concern, will be scattered among various companies, probably in noncompeting fields; some in a copper mine or electric light company; some in the bonds of a municipality, issued for the purpose of some local improvement; some in government securities. Beside these various stocks and bonds, on which he receives dividends and interest (part of which represents the profits of the various concerns), he may have an interest-bearing account in some bank, in addition to his checking account. He may receive further interest from mortgages on land and houses, and rent from tenants on real estate which he owns outright. In addition he may receive fees as director in one or more companies, and a regular salary as officer in one of them. In the largest incomes, as the table on page 156 will show, a relatively small proportion is derived from business, wages, or salaries, a large one from property.



The Ford enterprise has been enormously profitable. The increase of its assets has resulted wholly from the profitable sale of automobiles. Each increase in assets has provided a new source of income for its few owners. (Data from *N. Y. Times*, February 4, 1927.)

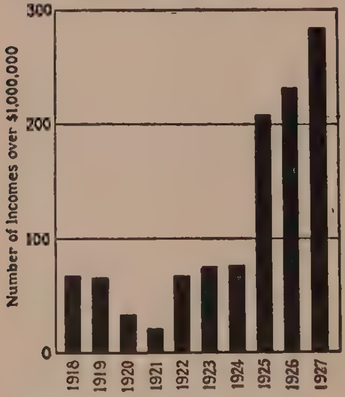
3. *Rich Men's Work and Idleness*

We may expect to find him spending his time in a manner appropriate to the various sources of his income. If he receives no salary or fees for taking part in management, but derives his wealth largely from income or land, there is little call for him to spend time in business affairs. A solicitor or trust company may manage his estate entirely, collecting rents, ordering repairs on buildings, paying for them and for taxes out of the rents, securing and evicting tenants, caring for all details. In that case he has merely to draw checks upon the bank account which will be kept miraculously full for

PER CENT OF 1922 PERSONAL INCOMES FROM EACH SOURCE[3]

INCOME CLASSES	WAGES AND SALARIES	BUSINESS	PARTNERSHIPS	PROFITS FROM SALES OF REAL ESTATE, STOCKS AND BONDS	CAPITAL NET GAIN FROM SALE OF ASSETS HELD FOR MORE THAN TWO YEARS	RENTS AND ROYALTIES	INTEREST AND INVESTMENT INCOME	INTEREST ON GOVERNMENT OBLIGATIONS NOT WHOLLY EXEMPT FROM TAX	DIVIDENDS	FIDUCIARY	TOTAL INCOMES
Under $1,000........	36.81	18.28	3.42	4.15	.....	10.98	11.64	0.21	13.49	1.02	100.00
$1,000 to $2,000......	79.54	7.54	2.08	.72	.....	3.77	4.56	.05	1.48	.26	100.00
$2,000 to $3,000......	74.88	10.03	2.69	1.12	.....	4.33	4.82	.05	1.78	.30	100.00
$3,000 to $5,000......	59.80	16.02	4.84	2.50	.....	5.14	6.72	.02	4.46	.50	100.00
$5,000 to $10,000.....	43.97	15.80	7.90	4.79	.....	6.17	8.49	.22	11.39	1.27	100.00
$10,000 to $25,000....	33.91	11.13	9.90	6.28	.....	5.65	9.71	.34	20.94	2.14	100.00
$25,000 to $50,000....	25.30	8.44	11.21	6.23	1.13	4.54	10.03	.42	30.11	2.59	100.00
$50,000 to $100,000...	18.79	6.20	12.32	4.36	5.29	3.76	9.70	.44	36.25	2.89	100.00
$100,000 to $150,000..	14.15	4.57	13.57	3.81	7.91	4.05	9.10	.39	39.19	3.26	100.00
$150,000 to $300,000..	9.48	3.54	13.42	4.38	12.81	3.15	8.51	.38	40.60	3.73	100.00
$300,000 to $500,000..	6.16	2.87	12.56	3.22	17.55	2.22	6.59	.56	45.41	2.86	100.00
$500,000 to $1,000,000	3.42	1.94	6.69	2.48	25.99	2.32	8.09	.30	45.13	3.64	100.00
$1,000,000 and over..	2.95	1.48	4.28	2.51	32.60	3.04	4.32	.53	46.99	1.30	100.00
Total...........	55.06	11.42	5.74	2.98	1.00	4. 92	6.99	.14	10.71	1.04	100.00

him. If his land was inherited, he may have little or no idea of how it was acquired, or how the present income accumulates. He is free to spend his time at Palm Beach, or lounging about a club with others of his kind. In much the same way he may be freed from responsibility if his wealth is in stocks and bonds: a firm of legal representatives will place his investments, buy and sell either at his direction or on its own initiative, and send him the balance of income after deducting its fees.



There were more than three times as many million-dollar incomes in 1927 as there were ten years earlier. (Based on data from U. S. Treasury Dept. Reports.)

Such a situation, however, where the recipient of income does nothing whatever but receive it, is not frequent in America. With the decline of aristocracy, it is much less frequent in Europe than it used to be. It is not considered discreditable for a member of fashionable society in America to take an active part in trade, and few men of energy and force of character are content to spend their time in eternal idleness. The great majority of wealthy men, therefore, take some part in managing the sources of their income and trying to increase it.

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[3] From *Income in the United States*, by National Bureau of Economic Research.

This part is often very valuable to society, although it may seem entirely selfish in aim. Of the great American fortunes many, it is true, were amassed by rapacious or underhanded methods, tricky railroad-stock deals, overcharging and frauds upon the public. But many others have come as the result of pioneer work in developing industry; they are the rewards paid by society, in the form of profits and salaries, to its captains of industry for their executive skill, hard work and resourcefulness. Many such men have failed in the struggle against shrewder competitors; others have extorted a reward beyond their deserts; so it is hard to generalize on the extent to which these men have earned their wealth by service to society. But we can say definitely that most of them, whether their activities are good or bad, are not idlers.

This banker's yacht was designed to accommodate thirty guests in style. The owner's suite comprises a large stateroom, a sitting room and a sun room, two baths, two dressing rooms and a maid's room. The hardware is gold-plated, the baths are of dark Italian marble. The fireplaces burn coal, and a pipe organ dispenses music over wires to nearly every part of the vessel. (Wide World Photos.)

4. *Highly Paid Occupations*

Besides the industrial magnates there are other groups of men, numerically small in proportion, whose earnings place them above the comfort class. Popular moving-picture actors, men, women, and children, have risen to fabulous salaries on the sudden wave of prosperity in the industry. A few professional men, especially corporation lawyers, are richly paid for piloting big business within the existing laws, and for influencing legislation in a way beneficial to their employers. Somewhat smaller rewards, but still generous, go to artists who place their talent at the service of commercial advertising, to the authors of best-selling novels, syndicated newspaper articles and cartoons, and to the editors of successful periodicals. Here and there a scientist, inventor of some useful and salable mechanism, chemical process or medicine, has risen to deserved affluence through the sale of his patent or royalties upon it, or has fought through to success in manufacturing and marketing it himself. The table to which we have already referred, however, on page 156 would lead to the conclusion that it is ownership rather than occupation which leads to riches; at least the immediate source of the largest incomes is not pay for work done. There is some recognition of this in the " earned " and " unearned " incomes categories used for income tax purposes.

5. *Older and Younger Generations*

There is a saying that in America it takes three generations to go from shirt-sleeves to shirt-sleeves; from the building of a fortune out of nothing to the final dissipation of it. This is, of course, extreme and exceptional. But it is quite the ordinary thing, and indeed to be expected, that the inheritor of a large fortune slackens in energy, fails to build as high above the starting-point as his father did. The typical self-made man is hard-working, abstemious. Unaccustomed in youth to leisure and enjoyment of luxuries, he has no time for them while the struggle is on, and when it is over it is too late to change his habits. He is bored by idle amusements, and often turns back to his office after trying a year or two of golf and travel. Or, if the quest for money has grown distasteful, he may turn his energy to philanthropy and patronage of good enterprises: to the founding of research institutions, libraries, scholarships, the endowing of orchestras, hospitals, and universities, expecting in return a voice in their policy and management. He may become an art patron, probably buying on the advice of agents, or because the names of the artists are well-known, since he himself is ignorant of art values. He may turn to politics and run for office as Senator, or, more likely, become a power behind the throne as contributor to party campaign funds and member of nominating committees.[4]

One of the high-income group. Not all high incomes result from the same activities. This one happens to flow from the talent to entertain. People who can, always seem willing to pay high for amusement. (Photo Underwood and Underwood.)

His son, meanwhile, has been brought up with less energetic habits, in a fashionable preparatory school and college, with an interest in motor-cars and dancing, and the assurance of an easy future whether he works or not. So he enters, after college, the office of his father or one of his father's friends, learning how the business is run, and turns without fatigue at the day's end to dinner, theater, and dancing at his suburban home or in the city's amusement district. In time he inherits his father's business and can, if he choose intrust it to capable subordinates, coming down for an hour or two in the morning to see that all is running well.

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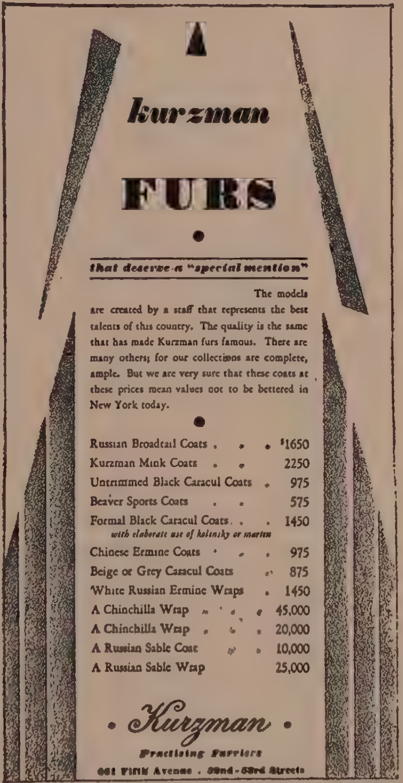
[4] An interesting picture of the retired business man and his wife is to be found in Sinclair Lewis' *Dodsworth*. Sam Dodsworth had, however, some unexpected resources within himself which make his case unusual rather than typical.

6. *Women on the Level of Riches*

His wife, too, is very different from his mother. The older woman had, perhaps, little education. She worked beside her husband through years of housework and saving pennies, and the acquiring of social graces late in life came with difficulty. The younger generation, a little ashamed of its humble origin, tries hard to cover it up by assuming the manner of those long accustomed to wealth. What was said of the increasing leisure and uncertain aims of woman on the comfort level is, of course, doubly true here. She is no longer needed to perform or even supervise home tasks, for the management of home and children is delegated to housekeepers, butlers, governesses, and private schools. Her list of fashionable acquaintances is large, and much care must be exercised to invite the right people: the accepted members of good society, the visiting nobleman, diplomat, or new artistic celebrity. Here she is aided by a capable secretary, a young woman of good birth and breeding but little money, who keeps track of invitations given and received, of obligations which must be repaid, and of the arrangements for making dinner and bridge parties, week-end house parties, presentation of the débutante daughter to society, all faultlessly correct and elegant. The secretary, too, will sort out from the scores of begging letters those which might arouse her mistress' sympathy, and attend to the sending of regular checks to an approved list of charities. The wife, if she is active by nature and rather more serious than usual in her ideals, will have like her husband some special hobby, a milk station, day nursery or settlement house among the poor, a foreign mission or a fund for aiding famine sufferers



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that deserve a "special mention"

The models are created by a staff that represents the best talents of this country. The quality is the same that has made Kurzman furs famous. There are many others; for our collections are complete, ample. But we are very sure that these coats at these prices mean values not to be bettered in New York today.

●

Russian Broadtail Coats . . .	$1650
Kurzman Mink Coats . .	2250
Untrimmed Black Caracul Coats .	975
Beaver Sports Coats . .	575
Formal Black Caracul Coats. . . *with elaborate use of kolinsky or marten*	1450
Chinese Ermine Coats . . .	975
Beige or Grey Caracul Coats .	875
White Russian Ermine Wraps .	1450
A Chinchilla Wrap . . .	45,000
A Chinchilla Wrap . . .	20,000
A Russian Sable Coat . .	10,000
A Russian Sable Wrap	25,000

• *Kurzman* •

Practising Furriers

661 Fifth Avenue . 52nd-53rd Streets

A $45,000 chinchilla wrap, it will be noted, is modestly listed in this newspaper offering by a well-known Fifth Avenue firm. (Advertisement *N. Y. Times*, November 4, 1928. Courtesy Kurzman, New York.)

in Armenia. To this she will give not only money but time and thought, and derive from it the happiness which goes with continued work for a worthwhile aim. Even the more frivolous woman, as she advances toward middle age, usually turns her interest more and more from amusement to a life work which gives her self-respect. This may be simply the problem of seeing that her children, if she has any, learn to act and think in accordance with the best conventions. Above all, they must marry well, if possible with some one of greater wealth and more respected ancestry than their own. For the daughter, she may aspire to a European title; the son must at any cost be kept from being entrapped by a designing chorus girl.

So the summer and winter seasons follow each other, city house and country house, a few weeks in the autumn for opera and other city activities, a January trip to Florida, or, in the yacht, to the Riviera, a few spring and summer weeks at the beach or in the mountains. Here a palatial summer home is waiting, perhaps a model farm if the husband was a country boy, perhaps a literal copy of some Italian villa, mediæval castle, or French château. In any case, it is within motoring distance of the country club, with its unceasing round of golf, bridge, dancing, and gossip about the latest intrigue or impending divorce. The following article by Stuart Chase [5] in *The New Republic* of May 25, 1927, presents a vivid picture of the manner in which some of the wealthier people in the United States spend their money:

PARK AVENUE [6]

Park Avenue on the island of Manhattan is the end of the American ladder of success. Higher one cannot go. Here comes to anchor at last fortune after fortune, until now the street lays acknowledged claim to the most stupendous aggregation of multimillionaires which the world has ever seen. The spoil of a continent, aye, of the seven seas, is massed along this harsh stone canyon—the winnings from oil, steel, railroads, mining, lumber, motor cars, banking, real estate, moving pictures, foreign trade, speculating, the manufacturing of widgets, the marketing of toothpaste, the distribution of the assets of button kings. The art treasures of Europe and the East—paintings, frescoes, paneling, tapestries, jewels, period furniture—have been imported by the shipload, to make these dollars manifest. The Avenue spends $280,000,000 a year, according to a recent and conservative estimate, and the income of its average family probably exceeds $100,000. The ratios are swollen, furthermore, by the number of Chicago, Pittsburgh, Cleveland and Detroit princes of finance who maintain apartments on the Avenue, even though they may use them only a few weeks in the year. The connection is a desirable one. Indeed, from every point of view, this street with its park, its flora and fauna, merits our respectful and thoughtful attention. There are no more worlds to conquer. If America has a heaven, this is it.

Park Avenue is parallel to Fifth, and two blocks to the east of it. The last of the ducal families are leaving Fifth—save for a strip opposite Central Park—and the palaces that they reared in the nineties are, after solemn public exhibition, being ignominiously destroyed by profane gentlemen in mud-plastered overalls, to give way to department stores, skyscraper office buildings, and shops devoted to the ultra-exquisite. It is into the social vacuum left by this desecration that Park Avenue has moved, but never, in its palmiest days, did Fifth Avenue boast such serried phalanxes of millionaires. More fashion it may have had, more individuality, more resplendent names bursting above the rooftops of an adolescent nation—Vanderbilts, Goulds, Astors, Senator Clark and his incredible château—but never such solid, crushing and cascading wealth.

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[5] Used by permission.

[6] From *The New Republic*, May 25, 1927, pp. 9–11.

We have, indeed, on Park Avenue, the mass production of millionaires. It looks the part. The gaudy individual mansions of the handicraft era have given way to the regimented, standardized and stupendous unit rectangles of quantity production. The Avenue, from Forty-sixth to Ninety-sixth Street, is a succession of monolithic packing cases, each an apartment house from twelve to twenty stories high, sitting with infinite solidity on its full city block. Hardly a terrace, a garden, a portico; nothing to break the relentless line of flat stone profile; not an inch yielded from the property line that meets the sidewalk. One great cube of masonry after another in almost unendurable monotony, save where the Grand Central Station bisects the Avenue neatly at Forty-second Street, and where the Ritz Tower bells upward to the sky. And yet it is a broad and noble street running like an arrow from north to south. From the Grand Central to Fifty-seventh Street, the park space in its center (under which rumble the trains of the New York Central) is dull stone pavement without a touch of green, but from Fifty-seventh north it blossoms into a strip of formal garden with grass and shrubs. Thus there is, in places, a park on Park Avenue, contrary to the philology of most streets.

The width of the Avenue permits of more air and sunlight than perhaps any other New York thoroughfare below Fifty-ninth—Broadway, of course, is a mountain trail compared to it—but of that unique width nothing, or almost nothing, has been made which gives the tired eye rest. The wealth and fashion of the nation lives, in perspective at least, in structures almost as gaunt as factories. Coming nearer, the differences in detail begin to register forcibly. Rolls-Royces parked along the curbings. Glimpses through carved doorways, past marvelously upholstered commissars, into entrance halls of marble, gold and velour. Now and then a glimpse into an interior court, with pointed fir trees fighting for a sunless, carbonated life. Governesses with exotic children; governesses with even more exotic dogs. On some of the monoliths, set-backs, above the fifteenth floor or so; set-backs promising sumptuous apartments with light from east and west, and the possibility of garden terraces.

The Twentieth Century flyer rumbles beneath our feet, the unending masses of the truckless motor traffic pour north on the easterly roadway and south on the westerly. Men with sticks, and the mustaches of British officers, are entering the Racquet and Tennis Club; here and there we pass a woman too beautiful to be true, but the bulk of the pedestrians are ordinary enough, shop girls, salesmen, the rank and file of a great city. For Park Avenue runs a restricted enough course, between the great stores and offices to the west and the dingier traffic of Lexington Avenue, with its subway, to the east.

Beyond its immense solidity, it betokens—nothing. The gates of this heaven are massive, but not pearly. The pearls lie inward, back of the defense of the relentless walls.

Within the limits of standardized steel and veneer masonry construction, the apartments do what they can. One hears of a single bathroom in jade and gold costing $35,000. One hears of "duplex roof" apartments, which are really separate houses perched on the tops of the monoliths, with light on four sides, renting as high as $40,000 a year. Mr. Adolph Zukor leases nine rooms at $4,000 per room. Twenty thousand dollars a year for space below the roof is a common figure. For the most exclusive section of the Avenue, the average rental is in the neighborhood of $1,500 per room per year. The "coöperative" apartment house, so-called, is here the order of the day. In a coöperative, one buys one's apartments outright. The residents then own the building, roof and walls complete, while the speculative builder, not, it is said, without a smile, steps out of the picture altogether. It costs about $7,500 a room to buy into a coöperative—say, $75,000 for a family home. This is obviously less costly than paying the current rentals, but one bears the not inconsiderable risks of the future of New York real estate. After all, there is a limit to the number of sardines which can be packed in a can.

Even at these princely figures, the Park Avenue resident only spends from 5 to 10 per cent of his income for rent or its equivalent, in contrast with the 25 to 35 per cent paid by the wage-earner. But a man who needs, according to current market quotations, $25,000 to finance a débutante daughter through one season, must save somewhere.

The most luxurious apartment on the Avenue is held by a bachelor. It is on the roof, and contains a ballroom eighty by forty feet, and a living room two-thirds as spacious. For its lordly floors, rare rugs have been especially woven, while all dressing cabinets have been built into the walls of the bedrooms, so that, when the drawers are closed, the wall design is innocent of all hint of the toilet.

Two modes of furnishings are very chic at the present time—wood paneling, largely imported, piece by piece, from the manor houses of England; and especially constructed bar-rooms with brass rails and beer engines, tiny but complete. . . . In one apartment stands a steel safe seven feet high, and when its owner has turned the combination handles and swung back the massive door, there stands before you, row on row, a collection of rare old vintages and liqueurs, as dazzling as it is priceless.

By and large, the important factor is not the outlay for rent, but for furnishings. One simply is not settled, if the decorations do not reach $100,000—the operation being frequently on the principle of giving the interior decorator *carte blanche*. For the fauna of the Avenue is perhaps equally compounded of real swells, and of butter-and-egg men whose children are destined to be real swells. (Not to mention a liberal sprinkling of apartments reigned over by that particular variety of blonde which gentlemen are said to prefer.) Imported fireplaces are strictly in order, as are beamed and frescoed ceilings. Meanwhile, in order that the master may not grow irritable waiting for his half grapefruit, electric clocks are sunk into kitchen walls, and regulated from the central office. Of servants' bedrooms, the average size is six by eight feet.

For those unduly irritated by the servant problem—in this heaven it is no more settled than upon earth; and for papa and mamma—or popper and mommer—after the children have married and departed, there is the apartment hotel, of which the Ritz Tower is the outstanding exhibit this year. In these, instead of maintaining ten or twelve rooms with a corps of one's own servants, one may live with equal luxury in three or four rooms, the house providing all services, including those of maid and butler, with meals served in one's rooms or in the exquisite restaurant below. For this snug home life one pays in the neighborhood of $3,000 per room per year in rental alone.

There are in the United States today more than 15,000 millionaires. Two hundred and seven individuals paid taxes on an income of a million dollars or more in 1926—the greatest number on record. 207 Incom Even the fabulous earnings during the War did not produce such a crop of million-dollar incomes. At the head of the list stands Mr. Henry Ford, with a private fortune of some $300,000,000 and sole ownership of the Ford Motor Company, for which Mr. J. W. Prentiss has on three separate occasions tendered one billion dollars. Thus Mr. Ford's total resources are in the neighborhood of $1,300,000,000 (in which both his son Edsel and Mrs. Ford share). The second greatest fortune is undoubtedly that of Mr. John D. Rockefeller, Jr., and the third, probably, that of Mr. Andrew J. Mellon, the Secretary of the Treasury. There are at least a score of individuals worth one hundred millions or more. There are more multimillionaires in the United States than in all the rest of the world combined, even if we include the quasi-governmental wealth of the princes of India and the East. Columbus revealed a continent which was destined to be richer by milliards than that he sought. Richer in money, if not in craftsmanship and beauty.

Of our 15,000 millionaires, nearly 4,000 live in Greater New York, an unparalleled concentration, and it is safe to estimate that the overwhelming majority live on Park Avenue or its immediate vicinity. We note apartment houses with sixty millionaires under a single roof! Along the whole stretch of the Avenue, perhaps 3,000 are on exhibition, while another thousand have the spending of the income on a million—$50,000 and upwards a year. And spend it. For here live the ultimate Joneses; if we can keep up with them, life has no further crowns, no further penalties. Through the service entrances, and up the service elevators, pours

For one certain
New York family

The twenty-third floor of The Sherry-Netherland is a single apartment . . . A terrace-promenade practically surrounds it, 175 feet long—the owner's "private estate." On the north, the terrace widens to 40 feet. Dining-room and living-room open onto this section, with great French windows . . . Some spring night, the owner of this apartment will give a terrace party. 100 guests will dine and dance on the promenade. Central Park, the Hudson, Long Island, will be a twinkling fairyland at their feet. The dinner will be prepared in the Sherry kitchens below, and served in Sherry style. Next morning, the owner can dash light-heartedly to Europe. Domestic expense ceases. Sherry carries on the burden of his household Butlers, valets, maids—all will be ready to function again when he returns . . . The Sherry-Netherland is a tower of residence-apartments with Sherry service. It is more than a place to live; it is a way of living. October occupancy.

The SHERRY-
NETHERLAND
FIFTH · AVENUE · AT · FIFTY · NINTH · STREET
OPERATED BY THE SHERRY – NETHERLAND CORPORATION
WILLIAM C. WARREN · RENTING MANAGER · REGENT 7370

(Courtesy of The Sherry-Netherland Hotel, New York.)

the quintessence of what money can buy. Lorelei Lee, we remember, turned back contemptuously from all the capitals of Europe, and headed straight for Park Avenue, the only spot from which shopping could be conducted properly. Nor could one ask for a sounder judge of values.

What the gross volume of that shopping is has recently been summarized by no other authority than the Park Avenue Association itself. Between Thirty-fourth and Ninety-sixth Street—a distance of about three miles—there live some 16,000 persons—roughly, 4,000 families. For the year 1927, the Association expects them to spend the staggering total of $280,000,000, or $70,000 per family. The average income, after allowing for savings and reinvestments, is probably in excess of $100,000. Well may the Association say that "Park Avenue leads the world in concentrated buying power." Nothing like it has ever been seen on earth before.

The Association goes on to give us the details of that gargantuan spending, being careful to point out that its estimates are probably 25 per cent below the actual figures, in order to state the case conservatively. In the aggregate, 4,000 women and their daughters will spend $85,000,000 for clothes of all kinds—about $21,000 per family, including one mother and one daughter. Fathers and sons will spend about $18,000,000 for clothes—a little more than one-fifth of the outgo for the women—say, $4,500 to tailors and shirtmakers, per family. What it costs to maintain a wife who keeps up with the procession could scarcely be better demonstrated. Let the young man of fashion budget his own outlay for clothes, multiply it by five, and see if he is prepared to meet the Park Avenue standard.

An artist's rendering of a certain famous $750,000 pearl necklace—available to one certain rich woman. For such trinkets million dollar incomes are necessary; but for what other reasons? (Black, Starr & Frost—Gorham, Inc. Used by permission.)

The total outlay for rent and furnishings, including pictures and antiques, is over $58,000,000, about $15,000 per family. For food and restaurants, the Avenue will spend $32,000,000, or $8,000 per family. For jewelry, it will spend $20,000,000, $5,000 per family. For motor cars and garaging, $16,000,000, $4,000 per family. For travel, $15,000,000; for beautifying and perfumes, $8,000,000; for yachts, $7,000,000; for theaters and cabarets, $5,000,000 (an absurdly low estimate, says the Park Avenue Association); for flowers, candy and gift things, $10,000,000.

And for charity, which covereth all, $5,000,000.

The Association discreetly refrains from estimating the total spent for liquor, but the *New York World*, following the same system of statistical analysis, computes an outlay of $15,000,000, or just under $4,000 per family.

The principles of modern merchandising have not been overlooked, meanwhile, in respect to diverting this golden Niagara into deserving channels. Indeed, it is probably the chief purpose of the Park Avenue Association to husband that diversion. The machinery therefor is not without interest. The Association is the creation of one H. Gordon Duval, and it consists of two branches. The "residential division" is the high-hat branch, and is composed of residents of the Avenue, who pay $26 a year dues in the interest of architecture and exclusiveness. When a bus route threatens its dignity, Mr. Duval, buttressed by legal counsel and a delegation of members, appears in high indignation before the city Board of Estimate. What board could fail to listen sympathetically to the accredited representatives of 3,000 millionaires?

The other, and less exalted division, is composed of some 1,200 merchants who live on or near the Avenue. Each pays $52—just twice the high-hat rate—and by way of compensation, it is stipulated in the bond that each member merchant shall be loaned a list of names, addresses and telephone numbers of those who live on the planet's gaudiest thoroughfare. So diligent has been the use made of these lists that some of the listees are beginning to protest. They allege that when they are not answering the telephone in connection with a new shipment of Harris tweeds, they are blunting paper cutters opening letters from the Adorable Model Company, Inc. Thus Mr. Duval would seem to be in danger of having a schism on his hands. But a man who can drive 3,000 millionaires abreast will doubtless be more than equal to the occasion.

Indeed, to live on or near the Avenue places one automatically on the key "sucker list" of the country. It is one of the responsibilities of the office. (If the phrase offends, "plucking the lilies" may be substituted, on the suggestion of the Better Business Bureau.) To suckers, or lilies—please yourself—the glad tidings are brought, by a staggering postman, of beauty salons, night clubs, investment opportunities, facilities for the chemical analysis of alcoholic beverages, flowers, pearls, exclusive marble mausoleums with embalming services included, drives for unnumbered charities, motor cars with long and haughty hoods, insurance, round-the-world tours, perfumes to blend with our personalities, auctions of genuine antiques (early English is the latest on the Avenue), French models for the little ones (a charming frock for a 6-year old, and only $125). Recently the file containing the mail matter sent out by a stock-selling promoter to *one* prospective customer was analyzed. The file weighed eleven pounds and represented ninety-one different mailings. One hundred and twenty-five envelopes were used. There were forty-one letters, seventy-nine multigraphed pages, fifty-two newspaper enclosures, thirty-four return post cards and seventy-two subscription blanks. The cost of the printing alone was estimated at $29.26.

To many dwellers on the Avenue, success has come from spirited salesmanship. To become now the target, rather than the arm that bends the bow, may be occasionally annoying, but is understandable. It is enough to cap the pyramid of the power which turns a million wheels, and animates a hundred million breasts. Here the American dollar reaches its dizziest point. To the towering and relentless rectangles of this street, the richest nation which the world has ever seen consecrates its cash balance, develops its personality in ten easy lessons, reads the confessions of those who have climbed to the stars from one suspender, improves its table manners, learns the rite of the cocktail, consolidates button factories, makes the sign of the cross with Mr. Bruce Barton, buys for a raise, and dedicates its life.

7. *Riches as an Aim of Economic Progress*

In America at least, the part played by people born to riches in the country's creative thought, its music, painting, literature, and science, is negligibly small. One must look far to find among them an instance of constructive, unselfish statesmanship. Their greatest contribution so far has been endowing and subsidizing the enterprises of others; an interest often sincerely philanthropic, but sometimes, one may suspect, performed at no great sacrifice, to increase the social esteem in which they are held. It is often attended, too, especially in the case of university and political party endowments, with a dangerous increase in their power over the country's thought and action. One may question even whether American wealth is often used to develop the art of living, from a merely selfish, Epicurean standpoint—whether it is productive of genuine, lasting pleasure to those who possess it. Here again generalizations are impossible, but the opinion is widespread among observers that instead of the fatigue and anxiety of poorer people the rich often substitute only neurotic excitement and boredom.

It is such observations, made at every period of history, which have led many philosophers to the belief that moderate wealth is better than riches; that the spur of want is, within limits, a valuable aid to the development of character and intelligence; that few people can withstand the degenerative influence of luxury. If these are true beliefs, then perhaps the economist would do wrong to look toward universal freedom from want as an ideal. "Comfort," with all its disadvantages, may be a better standard of living than riches. This unanswerable problem we must try to evade as far as possible. It is at least unquestionable that the millions of poor would be benefited by rising above misery to a point where physical health could begin, and native talents have a chance to show themselves.

It is also unquestionable that some people can and do use riches well, promoting the growth and enjoyment of themselves and others; and as time goes on, with the means at hand, more people may perhaps discover what constitutes wise expenditure and how to acquire the art of living. As to possible degenerative effects, society is at least warned of them in advance, and by proper education may do much to prevent them. We shall touch briefly later upon the problem of wise expenditure, as it affects the purchase of life's necessities. For the rest, assuming that the increase of wealth is, in general, a good thing, we shall go on to consider ways and means of increasing it, which at the same time make more beneficial to the worker the tasks by which he earns it.

BOOK II

RAISING THE LEVELS OF LIVING

PART I

RAISING THE LEVELS OF LIVING THROUGH EFFICIENT PRODUCTION

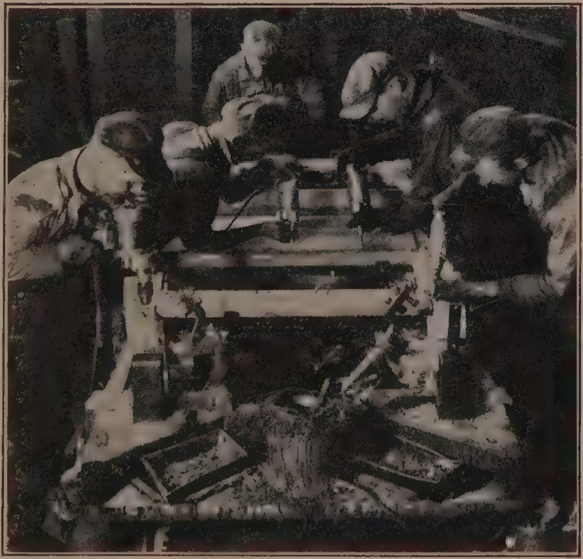
SECTION A

THE MEANING OF PRODUCTION AND ITS POSSIBLE RESULTS

CHAPTER 9

RURAL AND URBAN PRODUCTION PROBLEMS

1. *The Effectiveness of Modern Methods of Production*



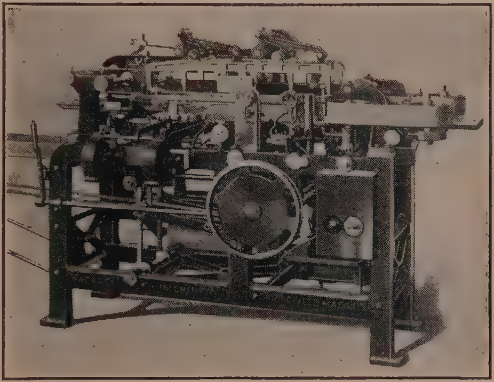
(Courtesy of Olds Motor Company.)

Production is the activity which results in goods. Nearly everything useful to modern man is the result of this activity. There are, of course, some goods furnished by nature which are useful in their original states. But not many. Air is one. But air—in a schoolroom, for instance—has often to be purified; and it has therefore had *some* effort expended upon it. This is the usual case. Nature furnishes the raw materials of wealth: the minerals, iron, coal, lead, zinc, copper, cement, and petroleum; the land, the air, and the water; wind, waves, sun-energy, electricity; the forests, the wild grasses and plants and animals—all these. And a primitive people makes use of them in primitive ways. So Hiawatha's life was a simple one. His clothes were the tanned hides of deer, bear, and wolf; his food the wild maize and fruits that were to be had for the effort of harvesting and the game that filled the forests; his shelter was also made of skins and the bark of trees; his weapons were simply fashioned of forest woods; and his transportation was furnished by the birch-bark canoe. But even he, it will be seen, had to expend some effort to procure these few essentials.

Our life in a sense is quite like his; in a sense it is very different. We depend upon many of the same fundamental materials, though an extended range of them. We spend the larger part of our time in the occupations of producing just as he did—though these occupations are largely carried on in field and factory instead of in tent and forest. The great difference in the two existences lies largely in the greater number of things we have come to depend upon—for better or for worse. Our foods are not just game and wild fruits; we ransack the earth to provide a varied diet. We carry our provisions from place to place in huge ships and long railway trains; we store them in chilled or heated buildings. Our shelter is not a tent with a venthole for smoke and with beaten earth for a floor. Our clothing is more than skins and feathers. We do not succumb, with no other struggle than incantation, to the terrible ravages of smallpox and fevers.

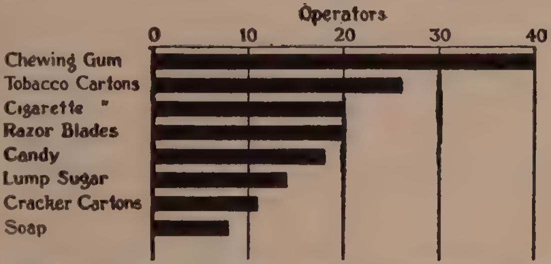
(Courtesy of Olds Motor Company.)

It is the tremendously complicated and delicately interrelated system of producing mechanisms which have made these extended ranges of goods possible. It is estimated that the machinery which makes up the ordinary surroundings of the person who lives in average comfort does the work of twenty servants in the Golden Age of Greece. All these machines are also the result of productive activity. We are all of us surrounded by and dependent upon a network of goods which lifts us above the levels of primitive culture and gives us the possibilities of civilization.



Wrapping machines will handle any moderate sized and reasonably shaped package. They are driving even the cleverest fingers out of this occupation—and a good thing too, for hand-wrapping is horribly monotonous. (Courtesy Package Machine Company.)

Progress in productive efficiency has never been so rapid as in recent years. The census bureau estimates that our total wealth at the end of 1922 had reached the staggering total of $320,803,862,000.[1] Such figures are of course meaningless. They gain significance when accompanied by the statement that the real gain of the last decade has been something like thirty per cent. We are apparently in the midst of a period of almost incomprehensibly rapid accumulation of wealth.



What a wrapping machine does to handwork. This graph reveals what happened in typical instances: it shows the number of handworking operations replaced by a machine (which needs two tenders). (Data from *Manufacturing Industries*, January, 1929.)

The criticism is often made of this rapid advance in material wealth that it is gained at the expense of more worthwhile activities—that in our feverish production we neglect the arts of consuming, that in gathering together the materials of life we lose our abilities for the enjoyment of them. We forget, it is said, that life was not made for work, but for the cultivation of man's highest capabilities. However this may be—and we cannot here enter into a discussion of these final values—we are of the belief that the higher things of life, whatever they may be, are only possible when material comfort is supplied as freely as possible; and it seems to us that genuine progress is registered by the accumulation of wealth. There can, of course, be foolish uses of it—we shall discuss those later—but, on the other hand, there cannot be wise uses unless it exists. And to condemn wealth because it is sometimes used foolishly is analogous to cutting off the nose to spite the face.

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[1] A revision of this figure for our national wealth will not be available until after a new United States census has been taken.

There is a very definite reason for believing that we are not requiring greater and greater efforts of men in production, but are, on the contrary, cutting very rapidly into the time and effort required of them in industry. Some of these reasons will become clearer as we progress into our discussion of the technique of industrial processes. We shall see that everywhere machines and natural forces are being harnessed to do the worst kinds of work. We shall see that there has been a continual shortening of the hours of formal work. We shall see that superior processes and contrivances are being devised for the better adjustment of machines, of series of machines, and of whole industrial units to each other. Some of the problems and some of the barriers to this progress will appear, we hope, in all their formidable colors, but not so exaggeratedly as to lead to the belief held by some misanthropic critics of our civilization that we live in an age doomed to the desuetude of Egypt or of Rome because of our failure to master the forces we have let loose upon our race.

It is perhaps pertinent just here as we begin the discussion of production technique to attempt the picturing of this progress. To do this, we shall show by as nearly contemporaneous figures as possible, how rapid is the cumulative process of wealth-making per capita at the present time. We shall also call attention to figures which show the success industry has had in raising the income of the masses of its workers. First, however, we may glance at a list of formative inventions:

LANDMARKS IN THE EVOLUTION OF PRODUCTIVE TECHNIQUE[2]

1663	Marquis of Worcester's design for a steam engine.
1690	Papin's cylinder and piston model.
1698	Savery's practical steam engine for raising water.
1705	Newcomen's practical cylinder and piston engine, used for pumping mines in 1711.
1740	Huntsman's crucible cast steel.
1763–82	Watt's improvements in steam engine.
1764	Hargreaves' spinning jenny.
1769	Cugnot's steam locomotive for roads.
1769–75	Crompton's spinning mule.

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[2] Shadwell, A., *The Engineering Industry and the Crisis of 1922.* John Murray, London.

1779	Blanchard and Magurier's velocipede.
1781	Hornblower's compound steam engine.
1785	Cartwright's power loom.
1790	Nicholson's cylinder printing machine.
1790	Saint's sewing-machine design.
1791	Street's explosive gas and oil engine-design.
1794	Metal lathes introduced.
1795	Bramah's hydraulic press.
1798	Robert's paper-making machine, set up in 1803 by Foudrinier and Donkin.
1799	Volta's electric current.
1800	Medhurst's compressed air.
1802	Symington's steamboat on Forth and Clyde canal.
1802	Murdock's gaslighting.
1804	Trevithick's steam locomotive on rails.
1804	Jacquard's loom.
1804	Woolf's compound steam engine.
1807	Fulton's steamboat on Hudson River.
1807	Street gaslighting in Pall Mall.
1808	Heathcoat's lace-making machine.
1811	Blast-furnace gases utilized for heating.
1812	Common reaping machine.
1814	*The Times* printed by König's machine.
1815	Krupp's cast steel.
1816	Ronald's electric telegraph.
1818	Iron vessel built on Monkland Canal.
1825	Stockton and Darlington railway opened for trains drawn by Stephenson's engine.
1826	Bell's reaping machine.
1827	Fourneyron's water turbine.
1830	Thimmonier's sewing machine.
1830–41	Whitworth's determination of true plane surfaces and the principles of exact measurement in the construction of engines and machines.
1831	Faraday's dynamo-electric machine.
1832	Hunt's sewing machine.
1836	Screw propellers by Smith and Ericsson (independently).
1838	Nasmyth's steam hammer.
1845	Hoe's revolving printing press.
1846	Armstrong's hydraulic crane.
1846	Howe's sewing machine.
1850	Lister and Holden's wool-combing machine.
1850	Pneumatic drills—American.
1851	Crampton's submarine cable between Dover and Sangatte.
1851	First Great Exhibition.
1856	Bessemer steel process.
1856	Siemens' regenerator furnace.
1857	Siemens' dynamo.
1858	Blake and McKay's boot-sewing machine.

1859	Lenoir's gas engine.
1862	Automobile car driven by Lenoir's engine.
1864	Martin's open-hearth steel.
1864	Fowler's steam plow.
1867	Otto's gas engine.
1868	Mushet's alloy (tungsten) steel.
1870	Hook's gasoline engine.
1870	Gramme's dynamo.
1873	Electric motor action with Gramme's dynamo.
1876	Bell's telephone.
1876	Electric lighting advanced by Swan, Edison, and others.
1878	Thomas' basic steel process.
1879	Hughes' experiments in wireless telegraphy.
1881	Electric tramways.
1883	Daimler's high-speed oil engine.
1883	Parsons' steam turbine.
1886	Cycle and car driven by Daimler's gasoline engine.
1889	De Laval's steam turbine.
1894	Northrop's automatic loom.
1896	Marconi's wireless telegraphy.
1897	Moissan's electric furnace.
1900	Zeppelin's airship.
1900	White and Taylor's high-speed tools.
1903	Wright Brothers' gasoline-driven airplane.

If this list is impressive in displaying the ingenuity of man, the general results of his ingenuity are much more so. If the interested student will turn to any current issue of the *Federal Reserve Bulletin* which is issued monthly, by the Federal Reserve Board, he will discover there an index of production, charted for the sake of covenience, which will show him where we stand in productivity. Similar information may be had from the monthly *Survey of Current Business* of the Department of Commerce. In general what we may learn (in 1930) from a scrutiny of such sources of information is that, for the decade just past, there have been the most startling gains ever made in a similar period since the world began.[3] In this period the gains may safely be set down as from 25 to 35 per cent, though exact measurement is difficult. During this period population did not increase at an unusual rate and the acceleration in employment actually slowed down. The lack of expansion in the number of jobs, indeed, furnishes one of the major problems accompanying the growth of mechanization, which we shall consider later. Here we are interested only in this manifest power of industry to produce more with less effort as time goes on.

At our present rate of progress we should be able to double our productivity every thirty or fifty years. But we must not too hastily assume that anything like this is apt to happen. For unfortunately we do not maintain this high rate of increase evenly. The whole trend of the production curve is unquestionably upward; but there are movements downward as well as upward. Prognostications as to our economic well-being in the future have to take both into account. The accompanying chart shows how these fluctuations occur.

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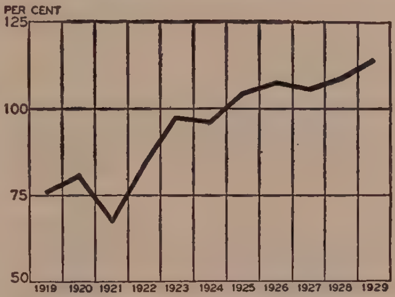
[3] The facts and theories involved in this have been made the object of a special study by R. G. Tugwell which was published as *Industry's Coming of Age* (1927). For evidence of increased productivity and for theories concerning its causes, that volume may be consulted.



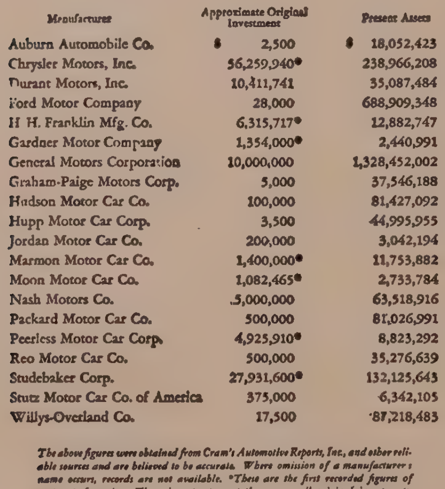
In this diagram is shown the year-to-year growth of industry and trade since 1919, as reflected in a broad weighted index of a large number of series, exclusive of those of financial activity; the figure for 1929 is based upon the increase shown by the preliminary unweighted data for the year (F. R. Bank, N. Y., *Monthly Review*, January 1, 1930.)

On the whole, though there are minor recessions, and though the best rates of advance are never held, we make definite gains in production. How more gains can be made we shall attempt to show in later chapters; but all the suggestions will be found to be advocacies of the greater use of the forces which have caused productive increases in the past—such as the more thorough application of scientific discoveries, the establishment of better personal and group adjustments in industry *und so weiter*. It is enough here to grasp the fact that forces are actually at work which are increasing our wealth and adding to our income.

Confirmation of the facts to which we have just been adverting, comes also from another angle. Mr. David Friday inventoried the year's capital accumulations for 1924 in our country at some eleven billions of dollars. This meant that we had been able to *save* something like one-sixth of our annual income. Concerning this matter he says:

> Now as the facts of industrial life for 1924 are becoming available we find that the people were remarkably busy working for themselves all the time they were cheering for the statesmen. They brought forth a sufficient amount of product to maintain themselves in a pretty tolerable state of comfort throughout the year, and to add some $10,000,000,000 to their durable wealth represented by houses and other buildings, by automobiles and roads, and by permanent improvements to their railroads, public utilities, and manufactures. When they had done this there was still left almost a billion dollars' worth of product which they sent abroad. There were also interest and principal accruing to them on their investments abroad. The people of this country took in return for their excess exports and their rights to principal and income $250,000,000 of gold, which they did not greatly need, and $1,000,000,000 of foreign securities. It appears then that the national savings for the year approximated $11,000,000,000.
>
> All this has been accomplished, too, while we have been paying almost $8,000,000,000 in taxes to the federal, state, and local governments for the support of

their activities. True, these governments have returned $1,000,000,000 in round numbers to the people in payment of debts, and another $1,000,000,000 in payment of interest. But this still left $6,000,000,000 as the portion of the national income which was used for the prosecution of public purposes rather than the pursuit of private ends.



Manufacturer	Approximate Original Investment	Present Assets
Auburn Automobile Co.	$ 2,500	$ 18,052,423
Chrysler Motors, Inc.	56,259,940*	238,966,208
Durant Motors, Inc.	10,411,741	35,087,484
Ford Motor Company	28,000	688,909,348
H. H. Franklin Mfg. Co.	6,315,717*	12,882,747
Gardner Motor Company	1,354,000*	2,440,991
General Motors Corporation	10,000,000	1,328,452,002
Graham-Paige Motors Corp.	5,000	37,546,188
Hudson Motor Car Co.	100,000	81,427,092
Hupp Motor Car Corp.	3,500	44,995,955
Jordan Motor Car Co.	200,000	3,042,194
Marmon Motor Car Co.	1,400,000*	11,753,882
Moon Motor Car Co.	1,082,465*	2,733,784
Nash Motors Co.	5,000,000	63,518,916
Packard Motor Car Co.	500,000	81,026,991
Peerless Motor Car Corp.	4,925,910*	8,823,292
Reo Motor Car Co.	500,000	35,276,639
Studebaker Corp.	27,931,600*	132,125,643
Stutz Motor Car Co. of America	375,000	6,342,105
Willys-Overland Co.	17,500	87,218,483

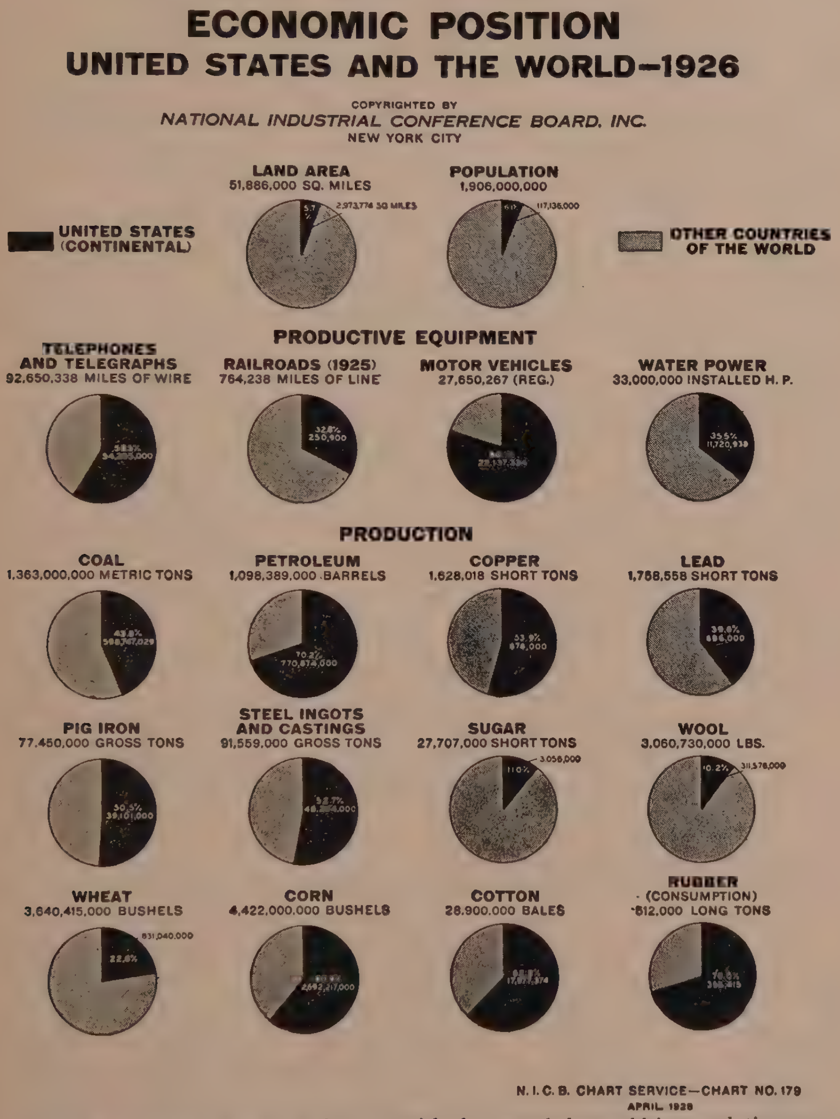
*The above figures were obtained from Cram's Automotive Reports, Inc., and other reliable sources and are believed to be accurate. Where omission of a manufacturer's name occurs, records are not available. *These are the first recorded figures of corporate financing. They do not represent the very small original investments.*

The growth of the assets of these automobile manufacturing concerns is an illustration of the way businesses, given a period of expanding demand and declining costs, can grow. High corporate incomes are not all distributed as dividends, part of them are reinvested; then new stock is issued, and dividends are expected to be paid on the increased capital. (From an advertisement of the Continental Motor Corp. *N. Y. Times*, November 12, 1929.)

With such a volume of savings there should be no dearth of capital in the United States; and the experience of the year shows that there is none. We financed the largest volume of building operations which has ever been carried on in any year. We absorbed a volume of new corporate and government securities during 1924 which was unprecedented in our history. New capital issues, excluding refunding, listed by the *Commercial and Financial Chronicle*, totaled $5,569,689,190. This is a full billion and a quarter larger than the flotations of any previous year. And yet all of this capital was furnished at interest rates which were declining throughout a large part of 1924. It is true that it was accomplished in part by the imports of gold and by the lubrication which this furnished our banking and credit structure; but we paid for the gold with goods which we produced and then exported instead of consuming them ourselves. Our credit structure shows no signs of strain.

Who made the savings of 1924, and what are the specific forms of wealth which represent them? When we list the tangible additions to our wealth they appear as follows:

Houses and other buildings	$5,500,000,000
Railroad improvements	1,000,000,000
Public utility extensions and improvements	1,600,000,000
Additions to manufacturing plants	1,800,000,000
Roads, pavements and public improvements other than buildings	1,000,000,000
Automobiles added	1,500,000,000
Gold and currency imported	300,000,000
Foreign securities imported	1,000,000,000



This chart compares the United States with the rest of the world in population, area, resources, and commodity production. The inference of comparative wealth is obvious; the responsibilities of economic leadership are becoming embarrassingly difficult for us to avoid. (Courtesy National Industrial Conference Board.)

The American people have long been regarded as extravagant livers and spenders. But as one surveys these figures he cannot escape the conclusion that with all our so-called extravagance we are increasing abundantly our provision for the future.[4]

In the years since, also, the process of accumulation has apparently gone on. Studies of the actual rate are lacking for the years since 1925, but there are none of the evidences of decline which might be expected if there had been a slowing down.

In this movement toward the piling up of the capital equipment which, put into motion by human thought and effort, produces more and more goods, there are evidently two contributory forces at work. Technique is cumulative in the sense that each new discovery or addition to physical equipment is added to a store of these which is already huge. Also each is progressively more effective for having come at the end rather than at the beginning of a long development. We are at the very beginning of vast increases in capital equipment, in the power to produce goods, in wealth. But there are retrograde movements, from a variety of causes later to be examined, which hold back the progress which might otherwise normally be expected, and so prediction of the rate of increase is actually impossible. All that can be said with certainty for the immediate future is that great changes are beginning.

All indications are that this movement is cumulative. Wealth breeds wealth. Inventions, contrivances, improvements breed inventions, contrivances, and improvements. We shall be dealing, in our next chapters, with the ways and means of hastening this process—and at the same time of humanizing the procedure.

It might be well just here, however, to compare briefly the wealth of our own country with that of some others. This is the best measure of the success of our peculiar productive efforts:

GROWTH OF WEALTH IN THE COUNTRIES OF THE WORLD[5]

(*Figures in millions of dollars*)

	1922	1912
United States	320,803	186,299
United Kingdom	88,840	79,297
France	67,710	57,075
Germany	35,700	77,783
Italy	25,986	23,030
Spain	29,319	No data
Switzerland	4,567	3,030
Russia	No data	56,140

[4] *The New Republic,* xlii, 66 (March 11, 1925).

[5] These figures are not "deflated," that is, they take no account of the decreased purchasing power of the dollars in which wealth is expressed. The result of the deflating process would, for instance, reduce the apparent increase of 72% in our own wealth to about 20%. The other countries would suffer similar declines, depending on the value of their currencies.

GROWTH OF WEALTH IN THE COUNTRIES OF WORLD—*Continued*

(*Figures in millions of dollars*)

Poland	17,000	No data
Latvia	1,000	No data
Finland	3,600	No data
Netherlands	8,260	4,827
Canada	22,095	10,980
Mexico	7,900	No data
Cuba	8,000	No data
Argentina	13,178	11,680
Brazil	13,020	No data
Chile	3,064	No data
Peru	4,000	No data
India	21,960	No data
China	19,087	No data
Australia	9,689	6,113
New Zealand	1,756	No data

REAL WAGES IN THE UNITED STATES SINCE 1820[6]

Year	Index of Money Wages[6]	Index of Cost of Living	Index of Real Wages[6]	Year	Index of Money Wages	Index of Cost of Living	Index of Real Wages
1820	36	88	41	1873	85	106	80
1821	36	84	43	1874	82	107	77
1822	37	86	43	1875	77	106	73
1823	37	82	45	1876	74	101	73
1824	37	76	49	1877	68	93	73
1825	37	78	47	1878	67	86	78
1826	37	74	50	1879	66	78	85
1827	36	77	47	1880	66	86	77
1828	37	76	49	1881	68	89	76
1829	37	78	47	1882	70	90	78
1830	37	72	51	1883	71	88	81
1831	38	75	51	1884	71	84	85
1832	38	77	49	1885	70	77	91
1833	39	75	52	1886	70	77	91
1834	39	69	57	1887	72	78	92
1835	39	81	48	1888	73	79	92
1836	40	92	43	1889	73	81	90
1837	40	97	41	1890	74	77	96
1838	40	96	42	1891	74	76	97
1839	40	96	42	1892	75	75	100
1840	41	80	51	1893	75	76	99
1841	41	81	51	1894	72	71	101
1842	41	74	55	1895	73	70	104
1843	40	69	58	1896	74	69	107
1844	40	70	57	1897	74	67	110
1845	41	72	57	1898	74	69	107
1846	42	78	54	1899	75	72	104
1847	42	78	54	1900	77	76	101
1848	43	73	59	1901	78	75	104
1849	43	69	62	1902	81	78	104
1850	43	73	59	1903	83	81	102

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[6] From *The American Economic Review*, xv, 32, March, 1925. For the method used in joining the various series used the student is referred to Professor Hansen's article.

REAL WAGES IN THE UNITED STATES SINCE 1820—*Continued*

YEAR	INDEX OF MONEY WAGES	INDEX OF COST OF LIVING	INDEX OF REAL WAGES	YEAR	INDEX OF MONEY WAGES	INDEX OF COST OF LIVING	INDEX OF REAL WAGES
1851	42	81	52	1904	83	81	102
1852	42	80	53	1905	85	81	105
1853	43	86	50	1906	88	85	104
1854	45	86	52	1907	92	90	102
1855	46	90	51	1908	91	87	105
1856	46	92	50	1909	92	91	101
1857	47	94	50	1910	94	94	100
1858	46	93	49	1911	95	92	103
1859	46	85	54	1912	98	96	102
1860	47	82	57	1913	100	100	100
1861	47	77	61	1914	102	102	100
1862	48	96	51	1915	104	104	100
1863	55	109	50	1916	118	111	106
1864	64	141	45	1917	134	131	102
1865	72	191	38	1918	168	159	106
1866	76	154	49	1919	193	183	105
1867	78	136	57	1920	232	208	112
1868	79	143	55	1921	207	182	114
1869	83	125	66	1922	201	168	120
1870	84	119	71	1923	220	171	129
1871	86	112	77				
1872	85	109	78				

This table shows an index beginning at 41 in 1820 and rising to 129 in 1923. This means that real wages (the standard of living of the wage-earners) have trebled during this century. This seems to be a sufficient commentary upon the power of industrialism to better life—admitting, of course, that access to more goods *means* a betterment of life.

Although figures establish the fact of our increasing wealth, the discerning student will ask whether there is evidence available that these increases have actually resulted in raising the standard of living of the masses of our people. In order to discover this, one thing that is needed is a comparison of money wages received by the average worker over a period of years. But this is not sufficient, because it will be apparent that a given amount of money buys more at some times than at others, at least that it varies in its power to purchase goods. To supplement a comparison of money wages in the past and now, we ought to have also figures showing the cost of obtaining the goods, ordinarily used by people, for the same periods with evidence concerning the money received and with facts concerning the costs of goods. It is true that figures do not show everything. There are always many "invisible" additions to income. And these may be larger at one time than at another or in one place as compared with another. The growth of free education here has added to wages by reducing the individual's expense for the schooling of his children. European workers have more extensive social insurance than ours have. Figures are misleading to this extent, then, but they do tell something.

INDEX NUMBERS OF COMPARATIVE REAL WAGES IN VARIOUS CAPITAL CITIES, OCTOBER 1, 1924[7]

[London = 100]

City	Index Numbers Based on Quantities of Food Consumption in—						General Average Index Numbers	
	Belgium and France	Central European Countries	Great Britain	Southern European Countries	Scandinavian Countries	Oversea Countries	Based on Food Only	With Allowance for Rent
Amsterdam	85	89	79	83	90	83	85	85
Berlin	62	68	60	60	64	61	63	65
Brussels	53	55	52	52	58	53	54	58
Christiania	79	81	77	79	87	78	80	82
Lisbon	29	28	28	28	31	30	29	. .
London	100	100	100	100	100	100	100	100
Madrid	48	50	43	48	49	47	48	. .
Milan	49	48	45	51	55	49	50	53
Ottawa	157	151	163	158	176	176	164	146
Paris	74	74	70	71	83	71	74	75
Philadelphia	210	205	221	212	245	232	221	220
Prague	57	61	54	54	60	56	57	62
Rome	49	45	45	50	50	48	48	52
Stockholm	74	76	78	78	91	83	80	78
Sydney	141	131	155	149	138	152	144	. .
Vienna	45	45	45	47	49	47	46	50

We can get, by dividing, a representation of what the wages received actually meant in the past, and mean now, in goods income. This *goods income*—or *money wages* translated into *what money wages can buy*—is what economists call *real wages.*

Fortunately we have just such figures in the form of a table of indexes prepared by Mr. Alvin H. Hansen in 1925. It appears on pages 179–80.

That the United States is more fortunate than other regions of the earth in this respect is apparent to any observer. But it is not often realized that real wages in the United States are double those in the highest European city—London—as the preceding table shows.

We may congratulate ourselves upon the rapid gains in efficiency evidently being made in our basic industries and upon the consequently increasing annual increments of income available for the population—for, it must be remembered, not only do the figures show an *absolute* aggregate increase but also a *relative* increase, which is the important point. This is to say that not only do we pile up wealth for the nation but we increase income for the individuals and families which comprise the nation. While there may be cause for self-congratulation here, however, we ought to remember, what any casual observation is sufficient to remind us of, that we still fall far short of any ideal efficiency. We have only to look about us to see obsolete factories, run-down systems of transport, badly planned warehouses, and—perhaps worst of all—ill and irritable people, made so by the wretched conditions of modern work. These pose a problem for the modern intelligence. It is our task not only to move forward the outposts of discovery in industry but to devise the means of bringing up to our present norms of health and efficiency the great bulk of the men and the equipment of our age. It is no less a test of our advancement that we have still many units which are inefficient than that we have made inventions which should have caused their elimination.

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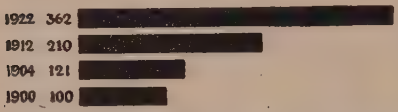
[7] From the *Monthly Review* of the Bureau of Labor Statistics, U. S. Dept. of Labor. The figures for Lisbon, Rome, and Milan are relatively low. This may be accounted for in part by the differences in the items of food consumption in the southern countries from those ordinarily consumed in most of the other countries included in this table. The budgets used in the comparisons do not make adequate allowance for the vegetable consumption in the southern European countries.



This chart shows the relative increase in total wealth of the United States, using 1900 as the base year. The numbers at the left of the bars are index numbers. (Based on statistics of Census Bureau.)

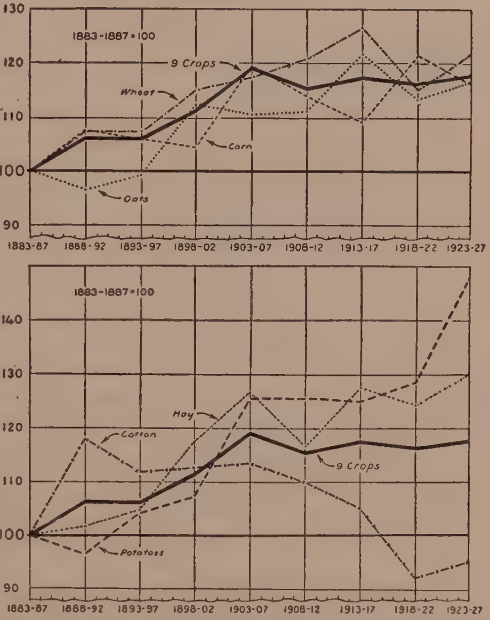
The accompanying chart shows how greatly our wealth has grown. But an analysis of this growth would also show that the relatively greatest advances have been made in the general fields of manufacturing rather than in extraction. If we attempt to arrive at an estimate of the gain of our national wealth in the last decade covered by the figures, we arrive at a 20 per cent increase. Now if we contrast with this general average of growth and development, manufacturing enterprise on the one hand and agricultural products on the other, we discover that while industrial values have increased at a rate far in excess of the average, the value of agricultural products has increased not at all, or very slightly.

2. *The Special Case of Agricultural Production*

We seem here to confront one of the great difficulties of modern progress: the unequal development of the necessary forms of activity. In agriculture, as we clearly see, our productive efforts have been relatively ineffective. And since agriculture is the most basic of all industries which indeed provides us with the raw materials of all those goods that make up the standard of life (except those provided by mines, by the sea, and as natural forces) especial pains ought to be taken to insure progress here. The whole problem of agricultural production is very complex. It is notably different too in America from the problem in Europe, as is very frequently said. Until just recently we have had, in contrast with Europe, relatively more land than workers and so our progress had taken the direction of extending the area of cultivated land. But most of this free land is exhausted now, and in recent years the direction of search for greater efficiency has been changed toward the effort to make each acre produce more than in the past, a search in which older countries have been engaged for a long time. And it is just here that progress has been rather alarmingly arrested.

During the decade in which the Civil War took place there was a great increase not only in acreage cultivated but in average yield per acre. Then machinery—the improved plow, the mower, the reaper and binder—was doubling and trebling the effectiveness of each worker; and extensions of cultivation were being made to good soils with natural fertility which were also free from the ravages of the many pests which later developed. As time went on, however, the full effects of machinery were felt. And newer machines, perfected since, have failed to make any such gains as were made by the earlier ones. Extensions of cultivation also were now into the semiarid regions east of the Rockies where lack of rainfall seriously limited production per acre. And, to make matters complete, by the beginning of the new century, the pests had come which are the bane of established agriculture everywhere. On the whole, production *per acre* has diminished since that time, as the accompanying charts will show.

INDEX OF YIELD PER ACRE OF EACH OF SIX IMPORTANT CROPS
AND COMBINED INDEX OF NINE IMPORTANT CROPS
BY FIVE-YEAR AVERAGES, UNITED STATES
1883-87 — 1923-27



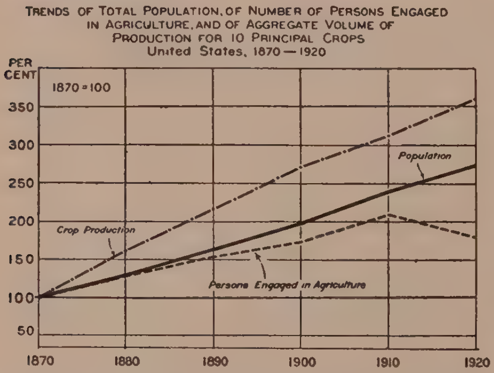
The five-year average yield per acre was higher in 1923–27 than in 1883–87 for all of the six crops except cotton. However, the average yield for 1923–27 was lower than it was in 1903–07 not only for cotton but also for oats and corn. In wheat and hay there has been little if any gain. The composite curves, shown by the heavy black lines indicate a somewhat smaller average yield than we once had, though considerably above that for the first period. The composite curves were made by weighing the yield of each crop by its relative acreage in the period 1908–12. (Courtesy U. S. Department of Agriculture.)

This makes a problem that is sufficiently serious to outweigh any over-confidence in the future that might follow from study of the rapidly increasing productivity of the manufacturing industries. It would not be serious if there were available an unlimited amount of land, for then our present agricultural production *per capita* could be kept up by simply bringing in new acres. But land is not available in anything like the necessary quantities. The seriousness of the situation is mitigated somewhat by the fact that we have shown an ability to increase production *per worker engaged in farming* as is shown in the accompanying table, and that, so far, there has been no decrease in production *per capita of the whole population* as, again, the preceding chart shows:

PRODUCTION OF PRINCIPAL FARM PRODUCTS PER FARM WORKER IN THE UNITED STATES

	1900	1920
Wheat	54.9 bushels	78.1 bushels
Corn	205.4 bushels	301.0 bushels
Cotton	.976 bales	1.247 bales
Rice	24.7 pounds	135.5 pounds
Sugar beets	16.0 pounds	135.3 pounds
Cattle on farms	4.28 head	6.29 head
Horses on farms	1.33 head	1.86 head
Sheep on farms	4.08 head	3.66 head
Swine on farms	3.62 head	5.29 head

Except for sheep, every item shows a considerable increase. This exhibits the chief difference between American and European agriculture. In Europe production *per acre* counts because land is scarce; in America production *per man* counts because men are scarce.



Trends of total population, of number of persons engaged in agriculture, and of aggregate volume of production for ten principal crops, United States, 1870–1920. The chart indicates that the ratio of population to crop production has not changed greatly since 1880, but that since 1870 the volume of crop production has increased much more rapidly than the number of persons engaged in agriculture. In fact, in 1920 the index of crop production was more than double the index for persons engaged in agriculture. Some allowance should be made for the fact that the date of the census was changed from April 15 in 1910 to January 1 in 1920, a time of year when the number of persons reported as engaged in agriculture is likely to be a minimum. However, it seems clear that the amount of crops per capita and the amount per man engaged in agriculture were both considerably larger in 1920 than in 1870. (U. S. Dept. of Agr. *Year Book*, 1923.)

However, the fundamental problem remains acute in spite of our demonstrated ability to raise greater crops per man. We have an increasing population; we desire to advance the levels of living; we are dependent upon the raw materials of agriculture; there is a scarcity of new land; we are not increasing the per acre yields of those now in use. Put this way, the whole critical situation becomes plain. Evidently our ability to better the results obtained from the use of our available raw materials depends mostly upon:

(1) Our ability to increase yields *per acre.*

(2) Our ability to use wisely the produce of the land so that it shall yield the maximum of satisfactions.

It will perhaps be well to explore each of these possibilities briefly to see the likelihood of success in meeting our problem.

Concerning our ability to increase yields per acre, we may at once say that the potentialities seem really endless. New inventions of machinery, new processes of cultivation, new controls of destructive pests, new successes in breeding for resistance to disease and for increased yield—all these are happening. And he would be a bold person who would say that within the next decade fundamental changes, changes that will revolutionize the ancient arts of husbandry, will not occur. They may. But do we need to depend upon them? Some light is thrown upon the problem by comparison of our own with European experience. What has been done abroad can be done here. It is a matter, as we have said before, of bringing the bulk of our productive units up to the standards of the best. The following figures show how far Europe is ahead of us in these respects:

AVERAGE YIELD PER ACRE OF VARIOUS CROPS IN CERTAIN COUNTRIES, AS COMPARED WITH THE YIELD PER ACRE IN THE UNITED STATES, 1909–1913 [8]

Crop	Yields per Acre						
	Germany	France	Great Britain and Ireland	Belgium	Average Weighted by Crop Acreage	United States	Superiority in Yield
	Bu.	Bu.	Bu.	Bu.	Bu.	Bu.	Per Cent
Wheat	31.8	19.6	31.7	37.6	23.5	14.6	61.22
Rye	29.0	16.6	30.1	35.2	26.6	15.6	70.40
Barley	38.5	25.8	35.3	51.1	34.7	24.0	44.96
Oats	54.9	36.2	50.7	66.1	47.4	30.4	55.96
Potatoes	203.7	127.4	216.2	277.2	157.2	97.0	62.12
	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	
Tobacco	1,713.0	1,231.2	936.8	2,034.2	1,481.0	820.8	80.43
	Tons	Tons	Tons	Tons	Tons	Tons	
Sugar beets	12.6	10.7	.....	12.3	12.0	10.1	19.28

Agricultural efficiency is superior in Europe because of longer experience with intensive cultivation and because of better controls through the social mechanism. When Germany wishes to raise the starch content of the potato, she sees to it that seed is planted which will accomplish the result. In this case she made a particularly spectacular gain, but there have been many others. Our own Department of Agriculture might do as much for us if it were given a chance.

However, our question is not wholly answered when we have discovered that by adopting European methods of cultivation we may increase our crops. Our conditions may be different. But here the conclusions of the Land Utilization Committee of the Department of Agriculture are reassuring.[9] It is their belief that for our ten principal crops which occupy ninety per cent of our crop area we may expect an average increase of nearly 46.8 per cent. They say, "If this increase in yield of crop land could be achieved by the time our population reaches 150,000,000 (estimated at about three decades), we should require only 269,662,000 acres, about 34,000,000 acres less than we used for domestic consumption in 1920." They say further, however, that "this would be a somewhat roseate outlook if it were probable that . . . it would be made in less than three decades; but when we remember that there has been no increase in average yield per crop acre in the past two decades . . . it seems improbable." Here is our problem again. We may go ahead if we like; it is a problem of intelligence in the use of nature's gifts.

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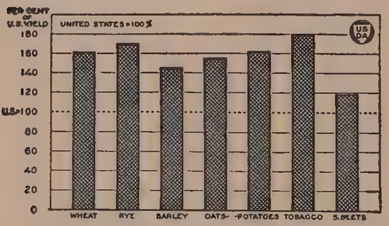
[8] From *Annuaire international de statistique agricole* (Rome, 1922).

[9] *Yearbook of the Department of Agriculture* for 1923, p. 469.



Average yields per acre, 1909–1913, of seven important crops in four European countries expressed in percentage of average yields in the United States. The average yield per acre for the four European countries—United Kingdom, France, Germany, and Belgium—is higher than that for the United States in the case of each of the seven crops. The combined average yield for all seven crops, weighted in each case of the relative importance as shown by acreage, is a little over 41 per cent higher for the European countries than for the United States. (U. S. Dept. of Agr. *Year Book*, 1923.)

The other way in which we may make very definite gains is through economies in consuming. Here again we *might* make vast improvements; but we shall be nearer reality in assuming that we shall not make more improvements than have been made elsewhere. For such a purpose we may compare our habits with those of Germany,[10] where the estimated caloric value of daily consumption at the time of this study was about fifteen per cent in excess of normal physical requirements.

"On the basis of this comparison it is estimated that under the German standard of consumption of animal products there would be an economy of about 64,000,000 acres in the amount of crop land required under the present American standard of consumption of animal products."

This admittedly would be somewhat offset by the relatively larger requirements of crops employed directly for human consumption, but the total saving would not be less than 37,000,000 acres.

The table following on page 188 shows the possible ways in which we may meet the problem of providing a sufficient basis of agricultural raw materials for the population of 150,000,000 which we may expect to reach in the next few decades.

Each of the three columns is based "upon extreme assumptions. The first emphasizes the fact that without important changes in methods of production, standards of consumption, or both, we could not provide for a population of 150,000,000. The second and third rest on the assumption that one type of adjustment will be exclusively employed—that is, either increase in production per acre or modification in standards of consumption." However, by the time a population of 150,000,000 is reached, it is perhaps unlikely that we shall do either to the estimated extent; we are more likely to make a compromise. This is a field of admittedly unsafe prediction, but these things may happen. And it may happen that the prediction of Mr. J. B. S. Haldane in *Dædalus* will come true (see table on p. 188).

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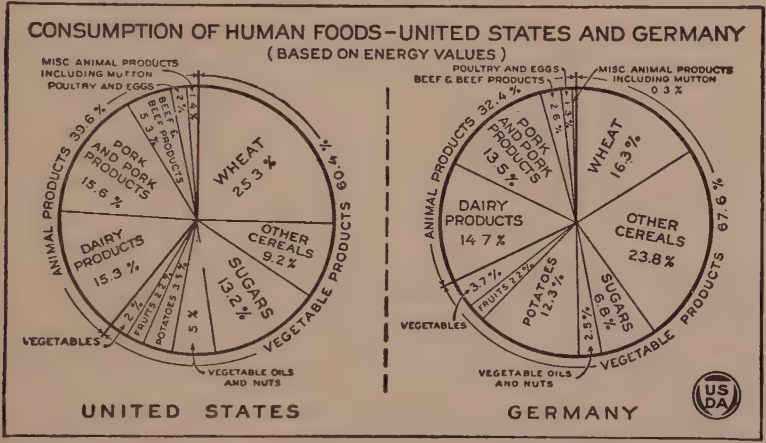
[10] *Op. cit.*, p. 481. We are here anticipating somewhat the discussion of consumption in later chapters of this book.



The German diet in the years just preceding the World War was ample in nourishment, but represented certain economies made necessary partly by scarcity of land and partly by a lower per capita income as compared with the United States. The combined consumption of cereals and potatoes for Germany comprised a much larger percentage of the total than in the United States, although our consumption of wheat was a larger percentage of the total than in Germany. The percentages of energy units obtained from pork and dairy products are not greatly different for the two countries, but beef and sugar have a considerably larger place in the American than in the German diet. (U. S. Dept. of Agr. *Year Book*, 1923.)

"As a matter of fact it was not until 1940 that Selkowski invented the purple alga *Porphyrococcus fixator* which was to have so great an effect on the world's history. In the fifty years before this date the world's average wheat yield per hectare had been approximately doubled, partly by the application of various chemical manures, but most of all by the results of systematic crossing work with different races. . . . *Porphyrococcus* is an enormously efficient nitrogen-fixer and will grow in almost any climate. . . . It has about the effect in four days that a crop of vetches would have had in a year. It could not, of course, have been produced in the course of nature, as its immediate ancestors would only grow in artificial media and could not have survived outside a laboratory. Wherever nitrogen was the

LAND REQUIREMENTS FOR A POPULATION OF 150,000,000.[11]

Type of Land Use	Assuming no changes in per capita consumption, or in the average yield per acre of crop land, carrying capacity per acre of pasture land, and annual growth per acre of forest land.		Assuming no changes in per capita consumption, but an increase to European standards in yield per acre of crop land, carrying capacity per acre of pasture land and annual growth per acre of forest land.*		Assuming no changes in yield per acre of crops, carrying capacity of pasture, and growth of forests per acre; but a reduction in per capita consumption of food and forest products to the standard prevailing in Germany prior to the World War.	
	Total (Thousands of Acres)	Acres per Capita	Total (Thousands of Acres)	Acres per Capita	Total (Thousands of cres)	Acres per Capita
Crop land	431,000	2.87	270,000	1.80	394,000	2.63
Humid grass land pasture	336,000	2.24	121,000	0.81	215,000	1.43
Semiarid pasture (constant)	587,000	3.91	587,000	3.91	587,000	3.91
Woodland pasture (constant)	237,000	1.58	237,000	1.58	237,000	1.58
Forest †	1,465,000	9.77	636,000	4.24	169,000	1.13
Provisional total	3,056,000	....	1,851,000	....	1,602,000	....
Less duplication of forest and woodland pasture	237,000	....	237,000	....	169,000	....
Net total	2,819,000	18.79	1,614,000	10.76	1,433,000	9.55

* For maximum increases in crop yields, the basis of determination was the average yields for four European countries; in humid pasture the carrying capacity of pastures in Germany; for semiarid pasture, the results of certain experiments under public management in this country; and for forests the average annual growth in the forests of Germany.

† Area required for growing the timber consumed instead of cutting from a stored supply. (U.S. Dept. of Agr. *Year Book*, 1923.)

principal limiting factor to plant growth it doubled the yield of wheat, and quadrupled the value of grass land for grazing purposes. The enormous fall in food prices and the ruin of purely agricultural states was of course one of the chief causes of the disastrous events of 1943 and 1944." And Mr. Haldane's imagination leads him to a description of how, when a strain of this organism escaped into the sea it multiplied so rapidly that the whole ocean jellied.[12]

The student will apprehend that though it is easy to show the world upon the threshold of numerous victories over nature which would make it possible for greatly increased populations to be supported, it does not necessarily follow that we ought to enter upon a program which looks definitely to any vast increases. It very well may be decided that it is better to use our intelligences to limit populations by various means such as are advocated by eugenists, and to use our increased resources for raising the standards of fewer people. As a matter of fact it seems probable that populations will increase, but at a diminishing rate, so that something of the stability of numbers will be reached in time here that has already been reached for instance in France. The question of the future of population numbers is too complex to be developed at any length here, but it does seem safe, from available evidence, to assume a population of some 150,000,000 in three or four decades and a gradual increase to something like 200,000,000, at which point stability may possibly be reached. Certainty in such prophecies is impossible, and later developments may greatly change future probable rates of increase. But we seem to be justified in attempting to see at least how we could care for a possible 150,000,000 persons soon, within the limits of our country.

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[11] With no allowance for exports and assuming the same proportion of our national consumption of farm products obtained from imports as for the present population.

[12] Page 59 ff. The student is urged to read this suggestive little imaginative forecast of the results of scientific advance, published by Dutton, 1924.

The lesson of our experience so far in both industrial and agricultural production is that the possibilities of progress in each are without limit, but that, at present, we are overweighting industrial advance at the expense of agricultural. This latter feature must be said to be a rather unhealthy one. It means that we are failing to provide the sound foundation in raw material strength that is necessary to continued progress; that, instead, we are paying abnormal attention to the proliferation and refinement of the goods which are made from the raw material resources. The remedy for this does not lie alone in the strengthening of production technique. What is required is a revisualization of the place of agricultural activities as the prime source of national strength, and a change in emphasis throughout the social order that can only come by changes in consuming habits and in our methods of apportioning income as well as in improving production. Another factor that exists in the background also, is the eugenic one. It has been assumed that population increases will follow a normal curve. But we cannot be sure of that. The voluntary limitations of births may spread very much more rapidly than we can foresee. If it does the elements of the problem will again shift. The careful student of economics can only assume that changes are likely to occur. What they will be he cannot say with any certainty. But, by looking carefully at past experience, he can take warning from what he sees there. When we do this, we see that the major problems are:

The silversmith. (Photo Hine.)

(1) To keep on making advances in production technique.

(2) To bring up to the standard of the best the bulk of our industry.

(3) To concentrate upon the agricultural situation as the probable limiting factor of improvement in the immediate future.

3. *The Possible Results of Production*

This leads us to say finally, in introducing our section on production technique, that there are at least three possible results which may be sought in production, any one of which involves raised levels of living and all of which are, therefore, objects of consideration here. The first and perhaps the most prominent result that is usually sought for in the study of production is to make it more efficient, that is to say, to produce as great a quantity of goods as is possible, of as high a quality as is possible, as cheaply as is possible. This is sometimes called the "efficiency ideal." Apparently we are making progress toward this goal; and it must be clear that this ultimately results in an increase in the level of living, because greater production must mean larger income. Any group which receives a share of this increased income may raise its level of living accordingly. We shall investigate later on, at some length, the reality of the receipt, by these social groups, of the incomes produced by industry.

(Courtesy of Olds Motor Company.)

The second consideration and one scarcely less important than that of efficiency is to make the working life as satisfying and as beneficial as is possible. This consideration has received a great deal more attention in recent years than it did during the early years of the industrial era because it has become increasingly apparent that unless the working life were made more satisfactory to the individuals who had to work, there would continue to be constant unease and even periodical revolts from the difficult conditions of this work.

The idea that work may be an end in itself, enjoyable for its own sake, is one which spreads very rapidly. It was less important as an aim during the period of the rapid development of the industrial system in the nineteenth century than it has since become, perhaps because it was difficult to see how, in the ugly factories and in the midst of whirling machinery and the grime and dust of primitive factories, it was possible to find any joy in industrial activity. Improvements in factory planning and a more complete mechanization of industry have made it more likely, however, that this end may reasonably be sought in industry as well as in other activities of life. After all, an individual's greatest and perhaps his best efforts are spent in the hours of his working life; and the making of that working life more satisfactory to him is as important as the bettering of any of the other conditions of his existence. We shall, therefore, have to consider this as a part of our discussion of production both in rural and in urban and manufacturing activities.

The third consideration which we shall have to keep in mind is that the working life ought rather to be a help than a hindrance to the reflective use of the leisure made available by the modern shortening of the working day, and to the reflective use of the increased wealth of the twentieth century.[14] This can only be accomplished by so managing institutions which are purely productive in their intent that they do not encroach upon the other areas of necessary human activity, for if perhaps the most engrossing activity of life is the work that an individual must do, there are, nevertheless, it must be recognized, many other areas of activity no less important to the development and maintenance of the whole career of an individual in society; and the working life ought to be so managed that it gives the necessary freedom for these other activities.

We shall go on, then, to consider how these various needs, especially that of producing as great a quantity of goods as is possible as cheaply as is possible, and making life as satisfactory and as beneficial as is possible, may be sought in the two great fields of productive activity: agriculture and manufacturing. And, first, we shall try to discover how they may be sought in agriculture and the rural life.

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[14] Cf. S. N. Patten, *Product and Climax* (Huebsch, 1909).

SECTION B

RURAL PRODUCTIVE EFFICIENCY

CHAPTER 10

INCREASING FARM PRODUCTION

The problem of increasing agricultural production is different for different localities, of course, because of factors of climate and location, but, like the problem of increasing the production of factories, there are certain general aspects of the situation which are true for any climate and any location and which are important too from the point of view of the student of our contemporary civilization who is trying to form the opinions that a citizen is obliged to form but who is not interested in too great technological detail. The problem seems to divide itself rather naturally into three parts: (a) the indispensable conditions for successful production, (b) better management of the farm unit, and (c) better provision for and use of marketing facilities.

A. THE CONDITIONS FOR AGRICULTURAL SUCCESS

We may first examine under this heading the conditions for success in agriculture. There are at least five indispensables: (1) fertile land, (2) enough of it, (3) nearness to markets, (4) a beneficent climate, and (5) an advanced state of the agricultural arts.

1. *The Need of Fertile Land*

It will at once be clear that if the land is naturally poor or if its fertility has been exhausted by unskillful use, it will not yield crops. And, lacking crops, the farmer has nothing to sell. Much of the soil of the New England states—though by no means all of it—is naturally stony and much of its fertility has been wasted by generations of use without proper refertilization. Much of the sandy soil of the South has

Breaking sod in the old way. It is a different kind of job to drive a tractor, and it takes a different kind of man to do it. (Courtesy of *The World's Work.*)

been similarly emasculated by persistence in the use of one crop alone—cotton. Much land even in the rich hill country of New York and Ohio has been similarly destroyed by over-cropping and particularly, in the hill country, by methods of cultivation that have allowed the precious topsoil to be washed away into the creeks. Where these, or other, causes have operated to impoverish the land a farmer's best efforts cannot yield him much. It is true too, however, that oftentimes a soil that has been exhausted may be restored by proper tillage and refertilization; and the recovery and putting back into use of many abandoned New England farms furnishes proof of this. The use of new crops or new fertilizers may have this effect.

WHEN Mr. Campbell talks about "the big business of farming," this is what he means in terms of his own company's farm "unit":

LAND

95,000 acres owned and leased
65,000 acres plowed
45,000 acres in crop each year

EQUIPMENT

56 tractors, representing 3,000 horse-power
500 14-inch plow bottoms
60 12-foot drills
72 binders
9 threshing machines
21 combines
200 wagons
12 motor-trucks
10 automobiles.
A modern machine-shop
Storage capacity—bins and warehouses—of 150,000 bushels
Gasoline storage capacity of 70,000 gallons

OPERATIONS

Ability and facilities to:
  Plow 1,000 acres a day
  Seed 2,000 acres a day
  Harvest 2,000 acres a day
  Thresh 30,000 bushels a day

The Campbell farm in Montana is one of America's most famous modern agricultural units—it might be described as an experiment in corporation farming. One thing is certain—no complaint of restricted acreage is justified! Some idea of the scale of operations can be gained from the above inventory. It must not be thought of, however, as typical. (From *The Magazine of Business*, June, 1928.)

2. *The Need of Sufficient Acreage*

It is further true that the farmer must have a sufficient number of acres to employ his time and his talents constantly and to the best advantage. Fewer illustrations of lack of prosperity on account of the limited size of farm holdings could be found in America than in Europe. We, in the United States, are scarcely past the years when the government had land to give away in good quarter-section lots (160 acres) to anyone who would settle permanently upon them and add their products to the national wealth. And in the countries to the north and south of us there is still this free land to be had. But in Europe, in Belgium, France, or Germany, there is pressure upon the land that has come about through division and redivision of the land among children who inherited it and who then set up households upon the part of the ancestral lands that came to them, redividing the estate again for their children. Many generations of this have so reduced the holdings that families are able to exist only by the utmost frugality and anything like what American farmers think of as a comfort level is utterly impossible of attainment, at least without radical changes in farming methods.

Perhaps the best illustration in the world of this land shortage is furnished by the conditions to be seen in some of the Chinese river valleys. Here in some places the land is as fertile as any land could be and the farmers have great skill and a deep love of the soil. But their individual plots have been reduced in size until they average only a few acres, and there have come to be in some places three or four people living on an acre. Professor J. R. Smith[1] comments that "at this astonishing rate one square mile could maintain 3072 persons, 256 cows, 256 donkeys, and 512 pigs. It would be impossible to find an American square mile that could feed, under American methods, the animals alone, to say nothing of the people." Where we compare this with conditions prevailing elsewhere in the world its significance becomes more apparent. And we can more easily understand that too great a reduction in the size of the operating unit may reduce whole rural populations to indigence.

There is, of course, a correct size for any one type of farm, but the factors which determine its size are complicated by the different kinds of agriculture which are carried on. M. B. Waite[2] tells the story of a Pennsylvania farmer with a 400-acre farm who, after selling off 100 acres, found, by giving a little better attention to the remaining 300 acres, that his sales were in no wise diminished; later, after selling off 200 acres more, and concentrating all his energies on his remaining 100-acre farm, he made it produce as much as did the original 400 acres.

It must not be supposed, however, from this, that it is possible to reduce the size of farms indefinitely and still have an increase in efficiency. W. J. Spillman[3] in speaking of the small farms that predominate in the region of the North Atlantic Coast of the United States said: "Small farms still predominate in that region, but the reasons are at least partly historical, and not wholly economic. In the West, which was settled up after labor-saving machinery had been generally introduced, these small farms are few in number and are gradually disappearing to make place for the more effective large farms. In general, farm-management investigations have demonstrated that the smallest effective area for a farm is that which will give constant employment at productive labor to the average farm family. It may be any amount larger than this, provided the farmer himself is capable of managing to advantage a larger amount of labor." This quotation indicates clearly that there is a point beyond which we cannot safely go in reducing the size of the agricultural unit.

We must be cautious enough to remember, however, that conditions change. The efficient size for a dairy farm is not at all the correct one for a fruit or truck farm. And the corn lands of Indiana have a different efficiency size from the wheat lands of the Dakotas, the cotton lands of Texas, or the potato lands of Maine; and lands change from one use to another. Dairy farms contiguous to the market centers of New York have gradually had to give up the ghost and be transformed into truck gardens; and in this process a subdivision had naturally taken place. One dairy farm will make several farm units for the growing of lettuce, spinach, celery, or cabbages. Conceivably, if cities were reduced in size for any reason, the reverse process might occur. This furnishes, at least, an illustration of the effect of exterior circumstances upon efficiency size in farm units.

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[1] J. R. Smith, *The World's Food Resources*, 1919, p. 520.
[2] *Yearbook of the Department of Agriculture*, 1904, pp. 172–73.
[3] *The Annals*, May, 1915, pp. 69–70.

The acreage requirements for the successful maintenance of a herd of cattle are greater than for most other products of agriculture. This, however, is a pure-bred Holstein dairy herd; and the mixed farming prevalent in most of the United States has such a dairy herd as one of its irreducible elements. (Courtesy U. S. Dept. of Agr.)

3. *The Need of Favorable Location*

It must also be quite obvious that the maintenance of a comfort level of living is dependent upon a favorable location; and favorableness in location largely means access to markets. Land in New Jersey near New York City is certain to yield a higher income per acre than equally fertile land in Missouri or Tennessee. This is because on such land the crops can be of the more perishable and higher priced small vegetables or fruits. On equally good land without such excellent marketing facilities either there must be grown less perishable and less valuable crops or there must be paid a higher transportation cost—which reduces the net income of the farmer.

It is, however, true that there are certain factors which tend to reduce the differences in favorableness of location. If it costs more to transport celery from Michigan to New York, the farmer has to pay a higher rent (or interest on a more valuable property) in New Jersey. It is also true that the efficiency of transportation increases. Refrigeration and automotive vehicles have come into use so recently as to furnish excellent illustrations of this.

A train can run only on its track and so can furnish transport for but a small fraction of the farms that can be reached by truck over the new improved roads that are being very generally built now by the townships, counties, and even by Federal aid. And before the age of ice-making and refrigerator cars how impossible it would have been for the citrus fruits of southern California to be marketed in Detroit and the peaches from the shore of Lake Ontario to be marketed in St. Louis or Omaha!

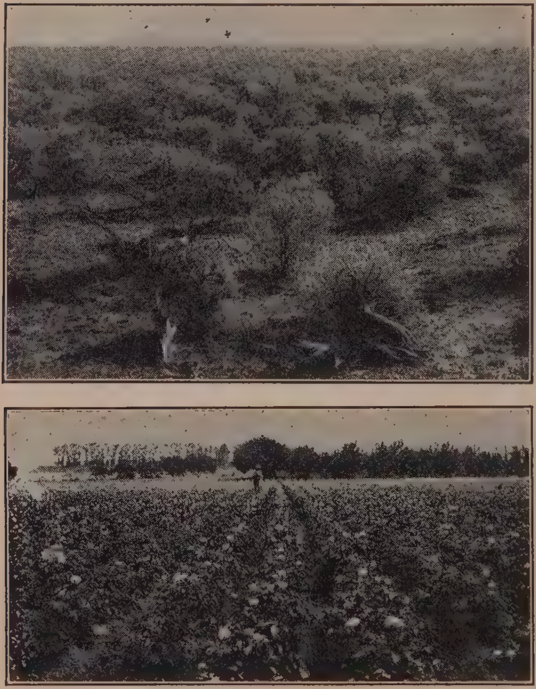
Icing refrigerator cars at Huntingdon, Pa. to keep perishable goods fresh on their journey to market. (Courtesy Pennsylvania R. R.)

So it is that civilizational advances which seem at first to touch not at all—or at most only slightly—the lives of farmer folk, turn out to be of the utmost significance. How many isolated families in the remote valleys of Pennsylvania, for instance, would have believed that their lives were to be revolutionized, no less, by the experiments being carried on by an obscure mechanic in a little workshop in Detroit. And yet the car that Henry Ford invented has revolutionized the farm life of America, and, indeed, that of much of the rest of the world. There is no reason to suppose that other revolutions cannot occur. In fact there are the best of reasons for anticipating even greater changes in the future. And they cannot fail to make basic shifts in the farm-location factor that now makes some plots so valuable and others, equally fertile, though more remote, nearly worthless.

4. *The Need of a Favorable Climate*

If ever the human race should learn to control the amount of water precipitated upon the land or the hours of sunshine in the week, the greatest gain upon nature ever made by our race would have occurred. For every farmer lives at the mercy of the weather to a degree which cannot be understood by anyone who has not lived upon the land. A summer shower upon a a field of newly cut hay, a few days of beating sunshine upon a field of seedlings or a night of frost in early September that nips corn, tomatoes or fruit may dissipate the possibility of maintaining a comfort level of life for a year or more. It is no accident that the most frequent topic of talk among farmers is the weather—its vagaries, and prognostications concerning it. Whole folklores have been built up around the weather, from the reluctance of the New England farmer to plant his corn until a certain phase of the moon has been reached, to the elaborate propitiatory rites offered to the gods of rain and sunshine by the Indians in the dry lands of the West. They are slightly ridiculous in an enlightened age perhaps; but we can sympathize with the human need that caused them.

One of the important limiting factors of agriculture is the lack of moisture. And it illustrates the limits nature imposes upon human advancement. It is often remarked that America would have been vastly more wealthy without the ranges of the Rockies which shut off the rainy winds from the Pacific and create an arid or semiarid country reaching to the Mississippi. In all this vast stretch of land there is too little rain for intensive farming. A tiny bit of the lack is supplied by irrigation, but only a tiny bit after all, and the western land remains in large part unused and sparsely inhabited because of a lack of rain.



Before and after irrigation—two pictures from the Yakima Irrigation Project, Washington. The upper picture shows the land covered with the native sagebrush. The lower picture shows the land after irregation; fruit trees, shade trees, and crops have driven out the sagebrush. Some of man's efforts to conquer nature have borne picturesque fruit. (Courtesy U. S. Bureau of Reclamation.)

But if there is too little rain in one place, there is too little sunshine in others—about the great lakes, for instance. And one of the limiting factors upon rural prosperity remains—and must remain until man learns to control climate—the irrelevance of the weather to any designs of man. So long as a week of continuous rain upon the full bloom of peach trees can destroy millions of bushels of potential fruit (as happened in the Ontario district in 1922) or so long as a half-inch difference in precipitation can cause the migration of a quarter of a million people in one state in a year or two (as has happened in western Kansas recently) man will live somewhat precariously upon the land unless he fortifies himself with the surpluses of prosperity against the deficits of drought or flood or frost. But he can do this. And some of the chief ways of insuring a comfort level of life for the rural peoples of America turn upon man's ingenuity in this respect. The use of climatic records, for instance, shows that even natural conditions of storm and pleasant weather are to be discounted by expecting them to occur as they have occurred in the past and not to live in the false hope that the climate is likely to change for the better. When farmers learn to expect rainy days, rainy days will lose their power over their lives and those of their families. The comfort level in rural life can only be attained by this kind of wise adaptation to nature's irreducible determinants.

5. *The Need of Advancement in the Agricultural Arts*

Man's chances of controlling his living standards are not greater in any department of human life, probably, than in the hope he legitimately possesses of improving his ways of using the land. The history of the use of the land discloses a continuous record of improvement which may yet have its most spectacular phases. It seems plain enough that the revolution in agriculture which brought in continuous planting in place of allowing land to lie fallow every third year, and which introduced so many new crops (such as the legumes and root crops) had to happen before it was possible to have had the industrial revolution which is so much more often talked about, for the new agriculture released the people from the land who went to work in the factories of industrialism and provided the food for their support as well as the raw materials for the new manufactures.

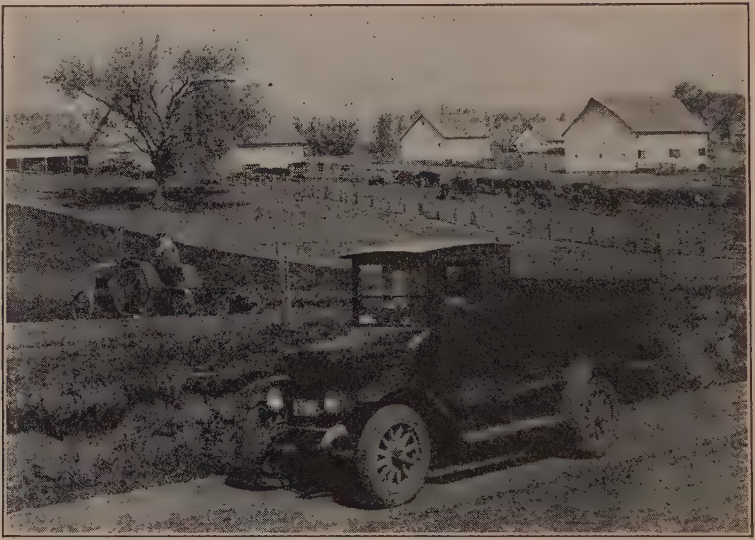
Another agricultural revolution occurred in America in the last half of the nineteenth century when agricultural machinery came into use, a revolution not yet ended, and the last phase of which has a number of important aspects, among which are the introduction of the automotive tractor with the consequent improvement in other machinery, the control of diseases and pests, and the scientific breeding of plants for resistance to decimating diseases and for greater yields.

6. *Better Uses of the Soil*

Frost, wind, ice, and water are continually at work upon the surface of the earth and the result of their operations is the formation of a layer of finely ground and weathered rock over most of the land of the globe which we call soil. Very early in biological history life found a pleasant home among the particles there and learned to thrust upward toward the light and air for the other elements which complete the chemical composition of the kind of life we call plants or vegetation.

The kind of rock which was weathered and the particular agencies which did the weathering determined that the physical and chemical composition of soils should vary greatly from place to place. Some soils are "light" and some are "heavy." Some are chemically adapted to one plant;

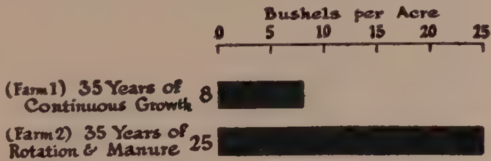
some to another. This elemental fact of differences in soils poses the primary problem of agriculture—for in time, human beings came to a stage in their development when they began to manage such natural forces as soils and plant life for their own benefit. And modern agriculture is merely a later stage of that managing. We may sometime—it is quite thinkable—discover some superior way of providing the chemical elements of human existence; but as yet we are fundamentally dependent upon plant life for existence. In that sense we are a secondary form of life, a parasitic species, along with other animals.



A scene typical of the prosperous mixed farming sections of the United States, well equipped with machinery and buildings, with a pure-bred high-grade dairy herd, with well-tilled fields, and served by hard-surfaced roads with automotive equipment. (Courtesy Internatl. Harvester Co.)

If the first victory was the discovery that plants might be artificially grown and so the casual provision of nature regularized, the second was perhaps the discovery that nourishment was to be had in the direct consumption of plants rather than the comparatively inefficient consumption of animals which have in turn fed on plants. And we have both the new and the old practice of men in our eating habits still, though we seem to move steadily toward the reduction of meat in the diet. The third great discovery came very much later—only a few hundred years ago, in fact. This was that crops might be "rotated." Until this time it had been generally inferred from the fact that yields on a particular piece of land declined after a number of years of cropping, that the land grew tired and needed rest and restoration. So there grew up the practice of letting fields lie fallow every third year. But now it was discovered that certain plants did not have this exhausting tendency—although we have only just discovered the reason—and that these could be grown in fallow years. The effect was enormous, so great in fact that historians do not hesitate to call it the "agricultural revolution."

The modern practice of rotation may be said to be the result of this experience. The fact that rotation "worked" in the sense that it assisted in crop growth has been known for some time, though the reasons for this assistance were not known. Not all the chemical mysteries concerned are known at the present time; but we do know now that not all crops require the same elements from the soil (or, more accurately that they do not require elements in the same proportions) so that a rotation, for instance, of clover, wheat, and corn makes such varied demands that all of them can be met. More importantly than this, however, we now know that leguminous plants—clovers, beans, peas, vetches, and their near relations—have the curious power of nitrogen fixation; that is to say they can take nitrogen from the air, where it exists in unlimited quantities, and transfer it to nodules which grow upon their rootlets. It is to be found there in precisely the forms that are best suited to the growth needs of plants. It is for this reason that an interval of leguminous plant growth restores to the soil the power to feed corn or wheat better than an interval of lying fallow, of rest. Nitrogen and phosphorus are the usual limiting elements in plant growth and, we see, one of them is wonderfully supplied in this way by nature's chemistry and that too as a by-product of a useful crop.



This little chart supplies incontestable evidence of the value of rotation and the application of manures to the farm soil. (Adapted from Farmers' Bulletin 1121, U. S. Dept. of Agr.)

This is not the only reason for crop rotation. Others are listed by Professor Weir as follows: (1) the elimination of the injury caused by certain insect pests, (2) limitation of the injurious effects of certain diseases, (3) assistance in the accumulation in the soil of organic matter, (4) improvement in tilth, which (5) conserves the fertilizing elements, (6) aids in solving certain liming and fertilizing problems, and (7) assists in controlling weeds.[4] We shall not discuss these in detail here; but we may properly point out that although the scientific knowledge of the necessity for a studied rotation practice has grown cumulatively, there are even today many thousands of acres of otherwise productive land lying fallow—"run out," as it is called—because of an ignorance of rotation rules or a failure to follow them. The cotton area of the South is still pretty much a one-crop section; and this is just as true of the wheatlands of the Northwest. There is still much room for improvement in our rotation practice.

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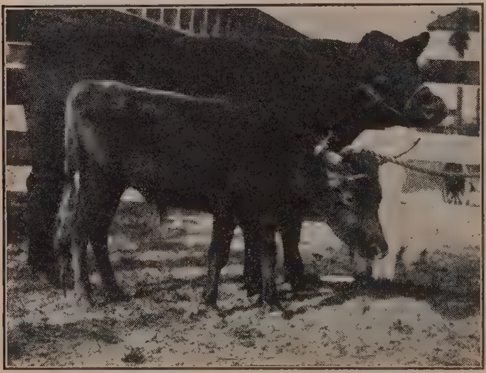
[4] Wilbert Walter Weir, *Productive Soils* (Lippincott, Philadelphia, 1920). Explanation and discussion of each of these points may be found in that book on pp. 264 ff.

It was a short step to the further discoveries of artificial fertilization—the supplying of the lacking chemical elements—and better tillage, the technologies of which form so great a part of the science of farm practice today.

7. *Improvements in Plant and Stock Breeding*

Man has always been dependent upon plants and animals for food and clothing. In prehistoric time the struggle to meet his needs from the meager sources of supply must have been a bitter one. At first, the amount of food and clothing he had, depended upon his skill as a hunter and his ability to wrest from a niggardly Nature such things as fruits, nuts, and wild grains. The desire to increase and control this supply early led man to cultivate those plants from which he had obtained the seeds and fruits and to domesticate some of the animals which he had had to obtain by the chase. This was a tremendous step forward, a step which greatly reduced the intensity of the struggle to maintain the balance between need and supply. Rising levels of living and the growth of population soon threatened this balance. Again the problem of obtaining increased quantities of food and clothing presented itself. There were, to be sure, many wild plants which might be brought under cultivation and many animals which might be domesticated; but man turned his attention to methods of selection and breeding of plants and animals with which he was more familiar.



A year-old Aberdeen-Angus steer (the larger one) and a three-and-one-half year-old Piney-woods steer—a graphic representation of the results of biologic science, and with obvious implications for agriculture. (Courtesy U. S. Dept. of Agr.)

Since the beginning of historic times, and probably before, breeders have selected the more desirable individuals for propagating their stock, but not until the close of the nineteenth century was there any definite attempt to formulate a science of breeding. In fact there was no basis for scientific breeding until the work of such botanists as de Vries and Correns and the rediscovery of the work of Gregor Mendel.

It was observed that offspring tended to resemble the parent stock; yet no two individuals of any type were identically the same. Usually the difference was slight but occasionally an individual appeared which was decidedly different from the other members of the species. It was these two tendencies which formed the basis of scientific breeding: the tendency to resemble parents, or heredity; and the tendency to be different, or variation. The great step, however, was the discovery made by Mendel and later by de Vries and others that plants and animals possess unit characters, height, color, shape, texture, etc.; and that in hybrids or crosses between two different but closely related species these unit characters appear according to a definite ratio.

With this knowledge the breeder is able to work with a definite aim in view. He may or may not gain his goal, but he no longer has to leave quite so much to chance as formerly. The scientific breeder must determine the product he desires, select parent stock which has the unit characters necessary to contribute toward this desired product and then work with a great deal of patience to accomplish what he has set out to do. The following table shows what has been done in one instance over a period of ten years at the University of Illinois Experiment Station.

TEN GENERATIONS OF BREEDING CORN FOR INCREASE AND DECREASE OF PROTEIN AND OIL[5]

Year	High Protein %	Low Protein %	Difference	High Oil %	Low Oil %	Difference
1896	10.92	10.92		4.70	4.70	
1897	11.10	10.55	0.55	4.73	4.06	0.67
1898	11.05	10.55	0.50	5.15	3.99	1.16
1899	11.46	9.86	1.60	5.64	3.82	1.82
1900	12.32	9.34	2.98	6.12	3.57	2.55
1901	14.12	10.04	4.08	6.09	3.43	2.66
1902	12.34	8.22	4.12	6.41	3.02	3.39
1903	13.04	8.62	4.42	6.50	2.97	3.53
1904	15.03	9.27	5.76	6.97	2.89	4.08
1905	14.72	8.57	6.15	7.29	2.58	4.71
1906	14.26	8.64	5.62	7.37	2.66	4.71

It is not our purpose here to enter into a detailed discussion of heredity and the intricacies of breeding; the student may learn of the fascinating accomplishments in this field in the works of Morgan, Bateson, Castle, Davenport, and Conklin. There are two important methods followed by breeders at present for improving plants and animals. It cannot be said that one is more important than the other; they are supplemental. The first of these is called grading and is usually carried out by introducing a pure-bred sire into a herd of common animals. It is a mass method, most easily utilized by the average farmer and requires a relatively small outlay of money. In case a farmer wishes to improve his dairy herd but lacks the funds to go directly into pure-bred milk stock, grading offers him the best alternative. It is necessary that he use pure-bred bulls from herds with a definite milk production record. He can then gradually build up his herd from offspring which measure up to certain standards of production by "culling" out the less productive ones. This is the method used by stock growers on the western ranges to improve their herds of cattle and sheep.

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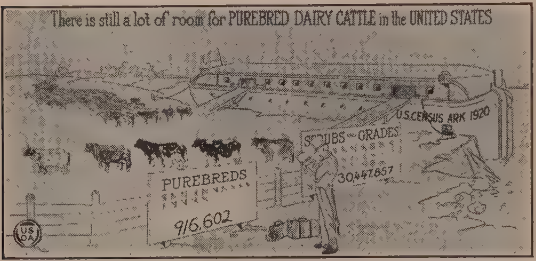
[5] Univ. of Ill. Exp. Stat. *Bull*. 128. This table exhibits a real accomplishment in biological experimentation. If more protein can be bred into corn, more starch into potatoes, and more milk into cows, one of the certain avenues of progress is permanently opened.


There is still a lot of room for PUREBRED DAIRY CATTLE in the UNITED STATES
U.S. CENSUS ARK 1920
SCRUBS — GRADES
30,447,857
PUREBREDS
916,602
US DA

Similar comparisons could be drawn for other kinds of stock. In industry and agriculture alike one of the greatest needs is to bring the average practice and equipment up to the present standard of the best. (Courtesy U. S. Dept. of Agr.)

The second method, crossbreeding and artificial selection is a much slower and more expensive method based upon experimentation. Much of this sort of work is now being done by governmental agencies. This method supplies the pure-bred sires to be used in the grading process. It also offers a way of developing types with certain definite desirable traits, such as the absence of beards in barley, long staples in cotton, or greater egg-laying capacity in hens.

The new Blakemore strawberry, bred for large production, resistance to disease, easy adaptation to a variety of soils and climates, and early maturity. Such triumphs as this reveal the practical worth for research and experiment. (Reprinted by permission of *The Country Gentleman*, 1929, by The Curtis Publishing Company, Philadelphia.)

The application of the scientific method to stock and plant breeding is an interesting chapter in agriculture; one to which we could devote many pages and mention only a few of the achievements. The things we eat, the clothes we wear, even the flowers which brighten our gardens and homes have been touched in some way or other by the hand of the biologist. The range of achievement is wider from hornless cattle to seedless oranges; from American Beauty roses to rust-resisting wheat. Perhaps the most work so far has been done in improving wheat, corn, and live stock, varying the oil or starch content of corn, increasing the yield and breeding for greater disease resistance in wheat, and producing animals with far more meat or milk or wool than the original specimens possessed.

There is an important movement over the country now for better stock and better seed. It is being encouraged by breeders' and stock growers' associations through the education of their members, concerning the advantages of better stock and seed as a means of greater unit yields. Stock shows, country fairs, stock-judging contests, demonstration trains, "corn and pig clubs," and short courses in agriculture, are all contributing to this movement. Agricultural colleges, governmental agencies, and farm bureau agents are coöperating in their efforts to aid the farmer in raising the levels of production. Despite the great advances made in the last fifty years we yet have much to achieve. We need better dairy and beef herds; we need to increase the number of disease resisting types among both plants and animals; we need new varieties of grain which will give us greater unit returns; and there is need for improved varieties of fruits and vegetables better adapted to shipping.

8. *Hazards of Production*

Insect pests, rodents, plant and animal diseases, and adverse weather conditions are the greatest enemies of the farmer. Methods of control and curtailment of these enemies combined with ways of bringing greater areas under cultivation offer another approach to the problem of raising the levels of production.

As yet we have developed no methods for controlling climatic conditions; instead, we have been and are altering our methods of production to meet the hazards imposed by adverse weather and climate. The biologist is breeding and selecting new types which are less susceptible to cold, heat, drought or excessive moisture, as the case may be. Artificial selection has produced varieties of corn which yield abundantly in northern regions, and new varieties of wheat which can now be grown profitably in our southern states. The specialists

"Smudging" in an orchard to protect blossoms or young fruit from frost. Crude oil is used in this type of orchard heater. (Courtesy U. S. Dept. of Agr.)

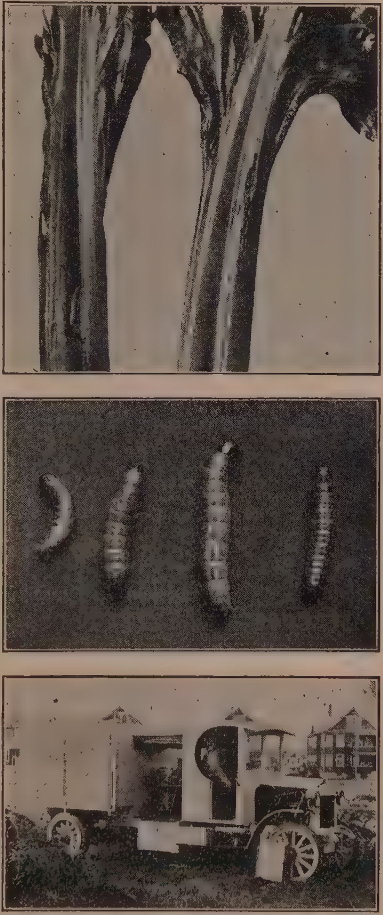
sent out by the United States Department of Agriculture to search the nooks and corners of the globe for new crop plants and new varieties of the plants already common to us are constantly sending specimens which when properly acclimated and adapted to this country, make possible the utilization of uncultivated areas and the replacement of present varieties by hardier and more productive ones.

Alfalfa, introduced from Central Asia about 1854, has now become one of the basic crops in many of our Western States. Rice from Japan, navel oranges from Brazil, durum wheat from Russia, cotton from Egypt, dates and figs from Asia Minor are a few of the many varieties which have been introduced into the United States and developed by the plant-hunters of the Department. Most of these crops have become so firmly fixed in our agricultural scheme that we seldom think of the romance—and often the personal courage—which conditioned their introduction into this country.

Roosevelt Dam, Salt River Irrigation Project, Arizona. This enormous masonry structure 280 feet high and over 1000 feet long impounds over one and one-half million acre feet of water (an acre foot of water is the amount necessary to cover an acre of ground one foot deep). The difficulties met and overcome in its construction make a fascinating story. (Courtesy U. S. Bureau of Reclamation.)

While the biologist and the explorer have been providing us with new and more effective crop plants, the practical farmer with the aid of the engineer has developed methods to outwit the extremes of a nature whose averages never represent true conditions. The use of smudges and fires to protect orchards and other crops from damages by frosts is now beyond the experimental stage. Greenhouse culture has reached a high state of efficiency.

The winter markets of northern sections receive much of their "out of season" produce from greenhouses. Experiments with the use of artificial light for maturing certain plants, especially flowers, and for increasing egg production, are yielding interesting results.



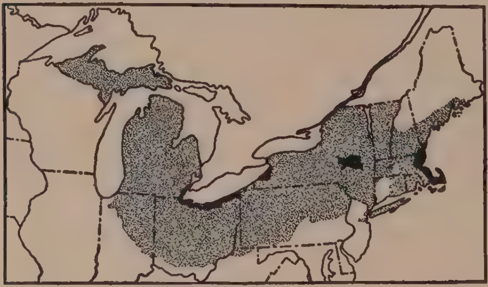
The European corn borer. The upper picture shows the work of the corn borer on stalks of Swiss chard. The middle picture shows the caterpillars of the borer in three stages of growth. The lower picture shows a special crushing machine used for destroying the corn borer by rolling infested plants too green to burn. (Courtesy U. S. Dept. of Agr.)

Our greatest progress, no doubt, has been made in supplying moisture to the great arid district that lies between the Mississippi and the Rockies. Irrigation is an old art. It was practiced very early in most parts of the world, especially in Egypt, in China and in India, and by the Indians of an early period in both North and South America. The actual methods of applying the water to the field have probably changed but little from those times to ours. Our progress has been rather in increasing the size of our operations and in the efficiency of our construction and its maintenance. Our modern irrigating projects with their miles of distributing canals, tunnels cutting through mountains, and enormous dams are worthy monuments of our present civilization.

Supplemental to irrigation, though less extensive, is the practice of "dry farming." This is really nothing more than proper tillage of the soil to conserve as much of the soil moisture as is possible. The top layer of soil is kept loose; this reduces capillarity and prevents the evaporation of the moisture from the surface.

We cannot increase our land area but we can add to our productive area by reclaiming wet lands, by clearing cut-over lands, and by irrigating arid lands. Much of this has already been accomplished; cut-over lands in Michigan, Minnesota, and other northern states, swamps along the Atlantic coast and dry lands in the West have been made productive. But there are still large areas to be reclaimed; and this will eventually involve the expenditure of vast sums of public capital, an expenditure which at present is being made rather slowly and reluctantly. A growing population may some day force us to measures which now seem unnecessary, measures so extensive even, perhaps, as the storing of the flood waters of the Mississippi River basin and the diverting of them to the great fertile areas of the western plains.

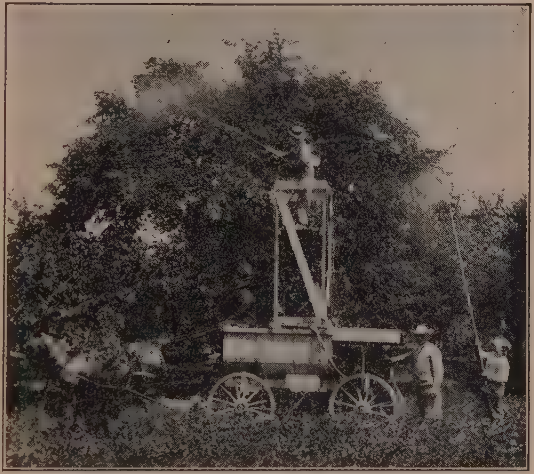
The control of insect and other pests and diseases which affect our plant and animal crops is no less a problem than that of curtailing climatic hazards. It is estimated by governmental experts that about ten per cent of the total crop value in this country is lost through pests and diseases. A list of the more important of these would include grain rusts, blights of various sorts, cattle and sheep ticks, the cotton-boll weevil and cotton boll worm, the foot-and-mouth disease, the white pine blister rust, the corn borer, the gypsy moth, the San José scale, anthrax, hog cholera, tuberculosis, the Hessian fly, the alfalfa weevil, the Mediterranean fruit fly, and numerous others. The boll weevil alone destroys nearly $200,000,000 worth of growing cotton every year. Rodents destroy approximately $500,000,000 worth of produce in crops and on the ranges. If we could eliminate or even effect better controls over these destructive agencies we should add materially to the productive efficiency of the country.



This map shows twenty years of the losing fight against the European corn borer. The black areas were those infested in 1910; by 1930 the pest had spread throughout the territory which is gray; and this in spite of the considerable effort and expense involved in study, eradication and quarantine. The expenditure for 1929, for instance, amounted to $1,257,580; and for 1930, $1,417,920 is budgeted. (Adapted from official maps of U. S. Plant Quarantine and Control Administration. Boston.)

A great many of these pests and diseases are not native to this country but have penetrated through shipments of plants, broom corn, grass, in the straw packing of many products, and in imported seeds. The case of the corn borer is an interesting example of this. It made its entrance into this country some time between 1909 and 1914 in broom corn shipped from Italy through the port of Boston. It now threatens the whole corn-growing area of the United States. The Federal government, in an earnest attempt at control, has used millions of dollars, but with only moderate success, as is shown by the accompanying chart. Many of our worst pests have been introduced in some such way. Once acclimated here they invariably spread more rapidly than in their places of origin, largely because their natural enemies are not present.

This brings us to the question of control and eradication. The boll worm, the corn borer, and the Hessian fly, when suddenly thrown into a new environment, practically free from their natural enemies, increase at a tremendous rate. The San José scale almost wiped out the citrus-fruit industry of California and was not conquered until the Australian ladybird (*Vedalia cardinalis*), a small red beetle, was shipped in and increased to an extent sufficient to combat the scale.[6] Life in the insect world is organized on a basis of checks and balances. So the control of the corn borer, for instance, was felt to depend upon discovering its enemies. Search finally revealed it in the shape of a minute parasite which was discovered in southern France. It has been introduced into the infested section of this country with some success. The methods of control and eradication vary with the pest or disease. The following suggest the more important and more generally used methods.



A power spray outfit. Spraying with poisonous mixtures offers one of the most effective methods for combating many of the orchard's enemies. (Courtesy U. S. Dept. of Agr.)

(1) Spraying and dusting (fruit trees, garden vegetables, etc.).

(2) Burning (tomato vines for mosaic, cotton stalks for weevils, etc.).

(3) Introduction of natural enemies (parasitic enemies of the corn borer, etc.).

(4) Fumigation (seeds).

(5) Dipping (cattle and sheep for ticks).

(6) Vaccination and inoculation (live stock).

(7) Quarantine of infested areas (stock or plant epidemics).

(8) Tillage (special methods of tillage for plant protection).

There is need for more extensive research in methods of control and eradication, and for a greater corps of inspectors at the ports of entry to watch for dangerous pests and diseases. The funds which the Department of Agriculture has at its disposal for experimentation and investigation are decidedly inadequate. No better investment can be made to insure the future of our agriculture.[7]

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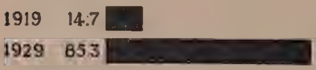
[6] Citrus fruits in Florida are now similarly menaced by the Mediterranean fruit fly.

[7] The work done under the direction of the Biological Survey in the eradication of rodents and predatory animals is one example of the results which can be obtained by earnest

9. *Power and Machinery on the Farm*

Some one has characterized the period since the Civil War in this country as the age of machine agriculture. Whether we agree to this or not, we must acknowledge the contribution which labor-saving machinery and power have made toward raising the levels of production in agriculture. In particular, the period from 1825 to 1850 marked the onset of the great transformation in agricultural methods, especially in ways of harvesting. Heretofore all the work of the farm had been done by hand except plowing and hauling. Grain was sown by hand, reaped with a cradle, and thrashed with a flail. Hay was mown with a scythe and corn was planted and cultivated with a hoe.



Thousands of tractors used on farms 1919 and 1929. (Data from *Recent Economic Changes*, p. 559.)

In 1831 William Manning of New Jersey patented the first mowing machine. Within the next three years Obed Hussey and Cyrus H. McCormick had patented reaping machines. Cast-iron plows had been in general use since 1825. By 1840 machines had practically replaced hand methods for thrashing. After these machines had become common they so affected the whole agricultural process in this country as to create what may, without exaggeration, be called a revolution.

A few comparisons with earlier methods will show the advantages of the new methods over the old. For example, in a ten-hour day it is possible for a man using three horses and a fourteen-inch bottom walking plow to turn over two and three-tenths acres. In the same-length day, one man operating a 25–30 H. P. engine drawing eight fourteen-inch plows can turn over an average of sixteen acres. In comparing work done in harvesting, the disparity between man labor and machine labor is wider. With the old-fashioned cradle one man can cut two acres of wheat in a day. With an eight-foot cutting and binding machine and four horses one man can cut an average of eighteen acres per day, and, of course, the labor of swinging the cradle far exceeds that of operating a binder. It is not uncommon for a tractor pulling gang plows, harrows, and seeders to prepare and seed from eighty to one hundred acres in a day. We might cite many more comparisons, but they would all point to the same conclusion: that increased production in the United States has been very largely dependent upon the introduction of power and labor-saving tools.

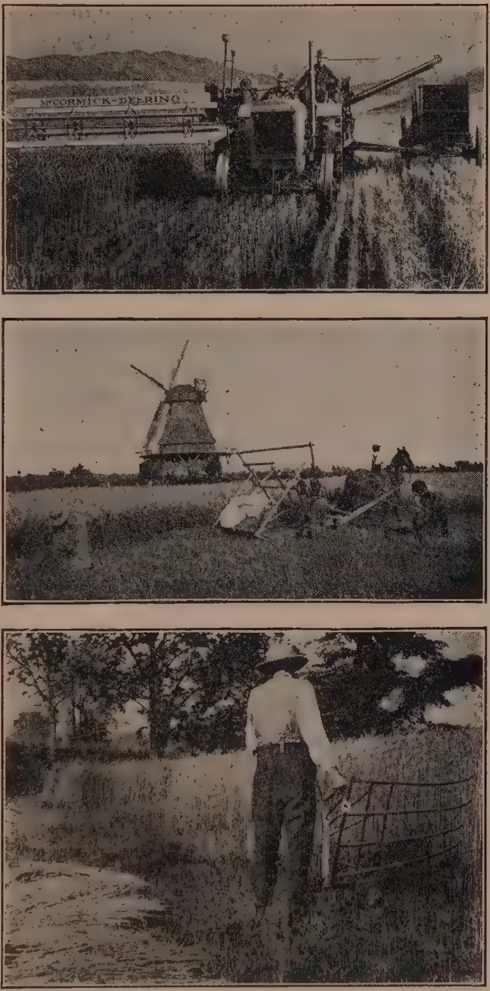
A list of these major tools, considered essential for the successful planting and harvesting operations on an average-sized farm of the Middle West, might perhaps give us a good picture of the part played by machinery in agriculture. The modern farmer follows a standard rotation practice, involving the production of corn, oats or wheat, clover and timothy, and a

coöperative efforts. Eradication campaigns were started by the Biological Survey of the Department of Agriculture in 1917. By 1920 the area treated had reached 18,000,000 acres of farm and range land.

root crop, such as beets or mangels. He must be machine-equipped for handling the production processes involved in growing all of them. A list might run as follows:

Tractor or teams; plows for team or tractor; harrow: disk, spring tooth, or spike; grain seeder; corn, beet, cabbage, or celery planter; cultivators; mower; hayrake; hay loader; harvesters; grain binder or header; corn binder; wagons; fork and derrick for handling timothy and clover; manure spreader; spraying or dusting outfit for fruits and vegetables; hand tools—hoes, shovels, rakes, forks, etc.

These are but the major tools, and if our list were to be made complete it would have to include many other items, for special uses on specialized farms. A few hours spent in an inspection of farm machinery at one of the large agricultural fairs will yield the student a better notion of the part now played by power and machinery in the agricultural process.



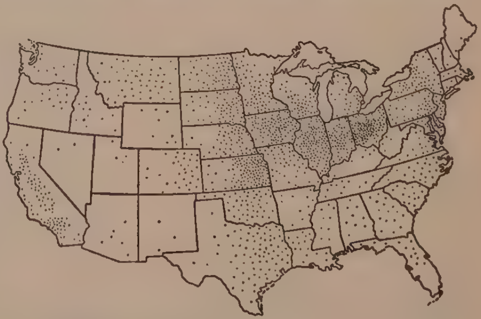
Evolution of the reaper. Lower—Cutting grain with a cradle. By this method, one man can cut about two acres of grain in a ten-hour day. The gathering and binding still remain to be done. Middle—One of the early types of reapers. Invented by Cyrus McCormick in 1831. Upper—A combined harvester-thresher drawn by either horses or tractor. Capable of cutting and threshing the grain from about forty acres in a ten-hour day. Adaptable to use on small farms. (Courtesy Internatl. Harvester Co.)

The sources of power on the farm are as varied as in industry. But the application of power to the farming process has been much more recent and much less extensive than in industry, and so animal power remains, as it always was, the main source of power for the farmers. But with the invention of the steam engine, the internal-combustion engine, and finally the application of electricity, there has been a slow realization by the farmer that the application of these power sources to his problems may not only save much drudgery but may also greatly raise the efficiency of production. Many of the labor-saving devices above mentioned involve the application of some motive power. The horse and mule have predominantly furnished this.

A machine transplanter sets out tobacco plants much faster and better than can be done by hand. The uneven machinization of American farms is well illustrated here. The field is one that is well suited to tractor operation. But the power in use is obviously man and mule power. Yet there is a machine planter. (Courtesy U. S. Dept. of Agr.)

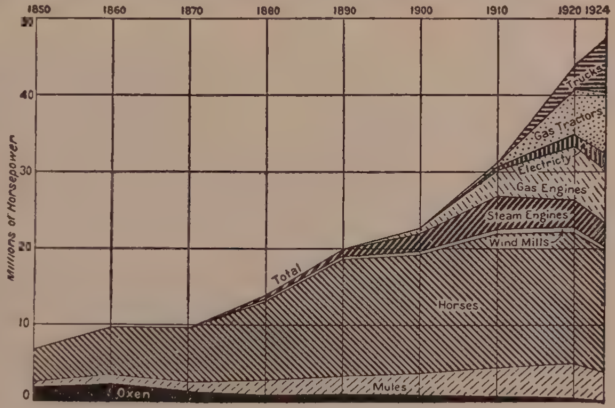
Besides the need for this motive power, there are such operations as pumping water, sawing wood, thrashing, ensilage cutting, grinding grain, operating milking machines and cream separators, and many other small tasks which can be done by power other than that furnished by man or animal.

Wind motors of various sorts have been utilized for a long time to perform many of these operations. It is remarkable, therefore, that there has never been any marked change in the mechanisms for utilizing the wind as a source of power. The changes have consisted of improvements, such, for instance, as the utilization of steel and galvanized iron for making the fins and the supporting structure of the familiar windmill. There have, however, been some interesting experiments in using windmills to drive dynamos. The current thus produced has been utilized in portable motors about the farm and for lighting purposes. Storage batteries have also been utilized for storing excess current to be used when there is no wind.



Estimated distribution of tractors on farms in 1924. Each dot represents two hundred and fifty tractors. (From U. S. Dept. of Agr. *Bulletin 1345*, p. 10.)

Water motors have been used to a very small extent as a means of supplying power on the farm, primarily because few farms were located where there was available water power. However, some communities have developed joint schemes for the production of electric current by the use of water power, supplying the farms in the vicinity of this plant with the current for lighting and other motors. Many tasks which at one time seemed impossible to perform by machinery and power have finally yielded to man's inventive ability. Tobacco and cabbage plants can now be set out by machinery. Potatoes and corn can be planted faster and more evenly by the machine method than by hand. Even the intricate operation of milking cows can be done by machines. Practically every phase of the agricultural process has been affected by the use of power and labor-saving machinery, from the preparation of the ground to the harvesting and storing of the matured crop.



The estimated total primary horse power available on farms in the United States from 1850 to 1924 is graphed here. Note that the increase of power available—and it has nearly doubled since 1890—has come almost wholly from other than draft animals, which, until that time furnished practically all of it. (From U. S. Dept. of Agr. *Bulletin 1348.*)

There is a slow movement towards a wider use of tractors in place of horses as the motive power for the many labor-saving implements now in common use. This has been accelerated since the design of the tractor has been changed and better adapted to the needs of the medium-sized farms which predominate in this country. Therefore, it is essential that if the tractor is to be universally adopted, it be so constructed as to be practicable in small fields. The earlier gasoline and steam tractors were efficient only in operating on the vast-stretching fields of the Dakotas and of Kansas and Nebraska. Even with the improved tractor now coming into the market, there is still much to be done in the development of a machine which will fill the place in the field that the Ford does on the road.

Tractors have not, on the whole, replaced horses as rapidly as they were expected to do a few years ago. There are in the United States at the present time about 20,000,000 work animals available for power purposes. This represents some 19,000,000 primary horse power. The power available in mechanical farm motors[8] probably exceeds 36,000,000 primary horse power. These two sources supply annually in the neighborhood of 15,000,-

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[8] Includes tractors and trucks as well as all forms of stationary motors.

000 horse-power hours. The number of tractors in use at present is over 500,000, which means that less than 10 per cent of the country's farms are equipped with them. There are many points in which the value of the tractor is unique as compared with the horse for motive-power purposes. Naturally, the tractor can be pushed for much longer hours during the busy seasons of the year than can horses. A ten-hour day is about as much as horses can stand, but with the use of headlights it is possible to use the tractors twenty-four hours a day, except for time taken out for repairs. The horse must be rested many times during the course of such a day, and at the end of it goes to the stable exhausted. The best plowing is done when the moisture content of the soil is at a certain stage. This rushes the work of spring fitting. With a farm of 160 acres or more a heavy strain consequently falls upon the horse power of the farm. It is also imperative that crops should be planted during the good weather, and the same is true of harvesting. It is in such circumstances that the tractor finds its greatest usefulness.

The tractor as an aid to spring fitting. Such wide fields as this permit the tractor to develop its greatest efficiency. On many such farms, tractor headlights may be seen far into the night during the spring-fitting rush. (Courtesy Internatl. Harvester Co.)

In general, we may say that power has done away with much of the drudgery of the farm. New and improved tools combined with the application of power have made possible the cultivation of greater areas, thereby increasing the volume of production. They have brought about a decreased unit cost of production and have helped to reduce waste and injury to the crop.

The improvement in the type of farm buildings has also done much toward the indirect raising of the levels of production. Better buildings have made for the protection of stock, machinery and crops against the ravages of weather and pests. Good buildings properly arranged also contribute greatly towards efficiency and convenience in farm operation. As an illustration of this point, a consideration of a modern dairy barn is of interest. Concrete walls and cork brick floors, steel stanchions, piped water running into individual troughs for each cow, overhead carriers for food, bedding, and manure, electric lights, and electric milkers, are the accepted thing on any up-to-date dairy farm. It takes little imagination to realize what this has meant to the man who formerly had to perform so many tasks by hand without the aid of modern equipment. The storage of crops in properly built places such as silos, granaries, and hay barns, has contributed its share towards increasing efficiency.

As a building material for the farm, concrete is coming more and more into a rightful prominence. It is fireproof, it can be made waterproof and is unique in that it can be run into various forms and shapes without much effort. Part of the material to be used may be obtained near by or on the farmer's own land. Hardly any farm but has its stony fields where the pile of rocks now fills some fence corner, and these are ideal material for concrete filling. With reasonable care and effort any farmer, with the help of ordinary labor, can do most of his own construction work. Concrete, for instance, is an admirable material for the building of silos, side walls, floors, troughs, bins, well linings, and machine bases.

The electric motor has made easier many of the most irritating minor jobs incident to rural life. (Courtesy General Electric Co.)

As has already been said, the farmer has in the past been dependent upon animals and in some cases wind or water for the power to saw wood and pump water. The development of the gasoline engine and the extension of electric transmission lines through the agricultural districts has furnished power which may be used efficiently for performing these countless operations on the farm. Electricity is an especially adaptable source of power for farm use. It furnishes a safe, convenient source of energy for accomplishing many duties about the farm, such as turning the cream separators, grindstones, feed mills, and fanning mills. The gasoline engine is much more efficient in the smaller units than is the steam engine. It furnishes a low-cost power almost as conveniently as the electric motor and is especially valuable where electric current is not available.

There are still too many farms which are not making the most use of power and labor-saving machinery. Part of this is due to lack of education and inertia; another part to financial inability to obtain these advantages.

It is to be hoped that eventually electric transmission lines may be pushed into all the agricultural regions of the country, supplying a cheap and efficient power, thereby relieving the farmer of most of the drudgery which has heretofore taken his time, time which he could much better have spent in planning better management or in recreation. There is yet much to be done in improving and adapting existing types of implements and engines to farm needs. There are still many operations about the farm now being done by hand which would yield to power and the machine.

CHAPTER 11

INCREASING FARM PRODUCTION (CONT'D)

1. *The Need for Better Management*

Before the advent of power and labor-saving machinery, the life of the farmer was relatively simple. His farm was a world unto itself. He and his family consumed most of the fruits of their labor. His main problem was to produce enough to maintain himself and his family and to have some surplus to exchange for the so-called luxuries of the time, such as coffee and sugar. Then came the industrial revolution. Villages grew into cities and new villages sprang up in the country districts. The demand for agricultural products increased and absorbed the small surplus which the farmer was able to produce. The available tillable areas of Europe were being drawn upon heavily when the great fertile areas of the new world came into bearing. Slowly the methods of the industrial revolution were applied to agriculture and there occurred a change no less significant than in the realm of commerce and industry. This was especially true in America after the Civil War period when agricultural production increased at a tremendous rate, a result, in part, of the advent of power and labor-saving machinery stimulated by a growing market. Of course this increased production was partly also the normal result of the richness and the vastness of our new agricultural areas. During this time little thought had to be given to rotation of crops or maintenance of soil fertility. Those crops were raised which promised quickest returns. This paid temporarily but not in the long run; and our early system of careless soil "mining" can be seen now to have worn out much land in our Southern and Eastern States. But this result did not at first appear and, so long as there were new areas of fertile country which expanding transportation systems could tap, the nation had little need to

A part of the organized effort which brings oranges to market; grading and packing are necessary to marketability. These are not just oranges; they are really a manufactured product. This kind of effort is as essential as tree husbandry, but it requires a high degree of managerial ability. (Courtesy California Fruit Growers Exchange.)

think of better farm management. The time has now come, however, when the frontier has been pushed to its westernmost limit. No new areas like Iowa, Illinois, Kansas, and Nebraska await the touch of the plow to add their product to the stream which is constantly flowing into our urban centers.

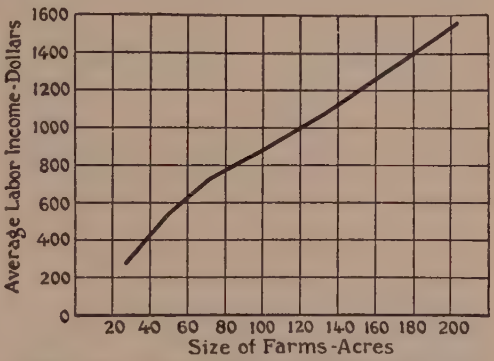
2. *Efficiency Engineering*

The farmer must now take stock of the factors which enter into his production problems and see if he cannot, perhaps, with a better combination of these factors, get a greater net output. The very nature of agriculture makes it impossible to apply outright the processes of efficiency which have so characterized the progress of our industrial enterprises in this country; yet there is much that can, after due modification, be taken over from the world of business and industry. In general, there is need for a great many studies and surveys of farm organizations in typical areas over the country. Out of this should come standardization of farms on the basis of the most economical type and size of farm unit and the amount of capital and equipment of stock and machinery needed to operate the farm to the best advantage. Standards of cost as well as standards of accomplishment for labor and farm machinery should be worked out. Such standards as these should become important criteria against which the individual farmer can check up his own accomplishment.

The size of the farm and the nature of the soil are the factors which determine the machine investment that will pay best. (Courtesy Internatl. Harvester Co.)

Many such surveys already have been made by the United States Department of Agriculture and various state experiment stations; and the United States Geological Survey has completed soil surveys of large farming areas. Experts in crop culture are endeavoring to determine just which crops are best fitted for these different types of soil, and which rotation systems will give the greatest returns. The misdirected energy of trying to fit improper crops to certain soils is a great national waste which has received comparatively little attention. The choice of the crops raised should depend to some extent upon the distance of the market, and its demands. For example, it would in all probability be unprofitable for a farmer to raise hay in some of the mountain valleys on the Western slopes of the Rockies and expect to market that hay profitably on the Omaha market. Other conditions permitting, grain would furnish a more concentrated product for shipping. If it seemed necessary to raise hay as a rotation crop, it could better be sent to market in the form of meat—that is as cattle or sheep.

The farmer as a business man is met with a problem of balancing the instruments of production to be employed. Will he operate a large or a small farm; will he use more hand labor or more machinery and horses? These are some obvious questions to settle. He should, among other things, be governed by what is the most economical size of farm in the particular section in which he happens to be farming, the price of land, the labor market, and the market for the product. As a business man, the farmer's test of success will be the net profit resulting from this balance. It is here that the need for some sort of system of cost accounting becomes apparent. The system must be workable, yet not so complicated but that it can be run by the farmer or some member of his family in spare time. Attempting to keep a set of books after a day's work in the field is much different from giving one's whole time to it, as does the accountant in a business establishment. However, several such systems have been worked out for the supplying of the farmer with just the type of accounting system needed to furnish him with the essential data of his business. Besides the cost account, there should be records of various sorts, such as records of egg production, milk yields, and quantities and kinds of seeds used; in general such records as these would show the financial standing and the nature of the business. With these, the farmer is in an improved position for checking up the profitableness of his operations. Such records help to locate the leaks which are cutting down his profits. After having located the leaks, the farmer may cast about more intelligently for remedies—such as a study of his farm layout or some application of a modified efficiency system.



This chart shows that labor incomes from 378 owner farms of the general dairying type usually found in the eastern United States are greater as the size of the farms increases—at least up to 200 acres. A farmer is under a handicap on this type of farm if he tries to operate with too small a unit. "Labor income" is the net income of the farm less five per cent interest on the capital invested. (From "Farm Management Practice of Chester County, Pa.," U. S. Dept. of Agr. *Bulletin 341.*)

The farm layout may perhaps be the source of much inefficiency. The farm, naturally, does not yield itself to planning as does a large plant which is more or less built to order. Much can be done, however, to modify certain of the topographic and physical features of the farm, such as leveling, grading, and draining; but the farmer often finds that there are certain practical limits beyond which increased efficiency would cost too much. If the enterprise is a new one, great care should be given to the location of the farm buildings from the standpoint of the efficiency of administration, the economy of time in reaching all parts of the farm, and finally, the æsthetic and health requirements of the family. Even though the farm buildings have already been located, many changes can be effected with a reasonable amount of cost. Carefully worked out plans may easily be prepared to govern all new building at least. Fields can be laid out in such sizes and shapes as will best lend themselves to economical working. A rotation practice can be developed which will conform to the natural layout of the ground as well as to the market to be supplied. Whether the need be for reorganization of an old farm or the laying out of a new one, the farmer usually finds it best to get the aid of a specialist, especially if he plans a very far-reaching change. However, there is much that he can do from year to year which may make for greater efficiency and thus greater production.

The following score card worked out by the Department of Agriculture[1] for use in selecting the farm is quite suggestive as to the many details which the farmer as a manager must consider if he would make his enterprise a successful one.

BLANK FORM FOR USE IN SELECTING A FARM

Location of farm..
Owner...
Address...
Distance to shipping station..............; to trading center................
Condition of roads............; in winter............; in spring............
Distance to schools and churches............; to nearest neighbor...........
Is telephone available?..................; R. F. D.?.......................
Electric current for lighting................; for power.....................
Total area of farm............; acres in crops............; acres that can be used for crops..........; acres in pasture........; acres in woods........; acres in waste land........; in roads, buildings, lots, swamps, lakes, etc.........; acres in stump or brush land........; kind of timber..............; ease in getting out timber or wood.........................
Topography as regards economy of cultivation........; irrigation............. ; danger from erosion or sliding............; flooding......................
Natural fertility as evidenced by kind of forest growth and native vegetation ....
Present condition of fertility as evidenced by growth of crops or weeds......... ....
Physical condition of the soil...............; adaptability to legumes.......... ....; adaptability to all kinds of crops......................

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[1] *Selecting a Farm*, by E. H. Thompson, Farmers' Bulletin 1088, United States Department of Agriculture.

Natural drainage..........; artificial drainage..........; depth of soil....
....
Kind of surface soil................; kind of subsoil........................
Water supply: Source......; quantity in dry summer months or during winter months........; cost of upkeep........; supply in pastures...............
....
Buildings as suited to kind of farming........; adaptability to another type of farming............; cost of upkeep............; arrangement for economy of work..........; desirability of dwelling as a home.........; conditions of fences..........; kind as regards cost of upkeep.........; farm highways... ......; shape of fields..........; nearness to farmstead...
Kind of orchards...........; condition.................................
Adequacy of trees for home use...
Climate: As to growing season..........; days available for farm work.........; healthfulness...
Neighborhood: Character of people..........................; available labor supply..
Possibility of increase or decrease in value of land........................
Possibility of selling farm...
Possibility of renting farm...
Desirability of farm as a strictly business investment.......................
Desirability of farm as a home or place to retire...........................
Adaptability of farm to changing economic conditions necessitating change of type...
Adaptability of farm for diversification or improved organization of the business
....
Adaptability of farm for high yields of crops and desirability for live-stock production.
Sureness of market for major crops grown..................................
History of farm as regards management of land with respect to keeping up fertility.
History of region as to development and speculation in lands as affecting present price.
Number of other well-developed farms in immediate vicinity which are successful..........How long have they been farmed?..........................
What are some of the operators' difficulties?...............................
How soon can the farm be made a going concern? [2]..........................

3. *Coöperation in Agriculture* [3]

The dominant strain in American thought is doubtless a belief in individual effort, yet all about us is plenty of evidence that rural life can be made more satisfying through the collective efforts of the farmers themselves. In agriculture both as an industry and as a way of life we see the results of these collective efforts.

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[2] The student particularly interested in this phase of agricultural production may find it worthwhile to pursue the subject further in such standard works as: Lewis C. Gray, *Introduction to Agricultural Economics* (New York, 1924); G. F. Warren, *Farm Management* (New York, 1917); and R. L. Adams, *Farm Management* (New York, 1921).

[3] Cf. also the chapter elsewhere in this book on the Coöperative System.

In the field of production the farmer is fast realizing that he can learn something from the methods of industry. Except in a minority of cases agriculture has not yet been found adaptable to the methods of large-scale production. But this has not deterred farmers from seeking some of the economies accompanying it by associating in groups. One finds members of associations over the country collectively buying their supplies. These may be purchasing associations which handle only those commodities used in large quantities, such as twine and sacks, fertilizers, and crates and boxes; or, perhaps, wholesale and retail stores which are able to supply any want from a reaper and binder to a package of pins.

In the field of finance, also, there have been many attempts to develop organizations which would better understand the peculiarities of the agricultural problems and shape their policies accordingly. This has resulted in the establishment of credit unions, building and loan associations, and a Federal Farm Loan system. There are a large number of coöperative insurance companies covering fire, live stock, hail, drought, and other forms of hazard.

The machinery necessary for filling the silo may be coöperatively owned. Filling silo with green corn cut fine is a job which lasts but a few days and furnishes stock with succulent food all winter. The silos here are of the most modern hollow-tile type. (Courtesy Internatl. Harvester Co.)

The coöperative ownership of expensive pieces of labor-saving machinery has enabled farmers to eliminate much tedious hard work. The machine requirements on a modern farm involve a heavy expenditure; more, in fact, than most farmers are able to stand. Too often this has meant curtailing expenditures which should have gone to give greater comforts and conveniences in the home. And in many cases the machines—such as manure spreaders, silage cutters, wood saws, cultivators, and mowing and reaping machines—are used only for short periods during the year. A group of farmers may easily get together and buy jointly such tools as these and so materially reduce the necessary individual investment in machinery.

In some localities this idea of joint ownership has been pushed a step further and has resulted in coöperatively owned creameries, cheese factories, bacon factories, abattoirs, cotton gins, and drying and canning factories, though this movement has so far had distinct limits. Coöperation has had a more successful development in marketing and storing than in the field of production. In fact the average person has probably heard much more of coöperative marketing associations than of any other form of joint endeavor on the part of the farmers because of the growing importance of such organizations as the Citrus Fruit Exchange and the Raisin and Prune Growers associations of California, and their relation to the consumer.

Education by contact with realities. Boys' corn clubs are an excellent training for future farmers. (Courtesy U. S. Dept. of Agr.)

A very interesting scheme has been worked out in some communities which provides for the payment by each member of the community or association of a nominal fee which entitles him to the services of a veterinary hired by the community or association. Few individual members could afford to pay for this service as individuals, but the combined fees are enough to obtain the services of a competent person. The situation with farm animals is much the same as with humans. Preventive measures are always better than curative. The veterinary hired by the year is better able to act in an advisory and therefore preventive capacity. Many farmers are building up their herds through the coöperative ownership of full-blooded sires. In this way better milk and meat animals can be obtained and the hopes of the individual farmer for better stock are much sooner realized than they would be if he were compelled to wait until his own resources were equal to the strain.

Education and recreation have yielded richly to the joint efforts of the members of the community. Smaller schools are being displaced by larger and more central organizations. Busses call for children in the mornings and return them to their homes in the afternoons. Increased facilities and better teachers have been made possible through the economies of centralization. The development of community or social centers where meetings, farmers' institutes, plays and entertainments can be held, are a result of and an incentive to the increase of coöperation. The good feeling and confidence which have been promoted at entertainments have without doubt been important factors in the development of economic coöperative ventures. Boys' and girls' groups of various sorts, such as pig, corn, and canning clubs have been of immense value in supplying wholesome recreation and satisfying the desire of youth for society. Community bakeries, laundries, and creameries have relieved the farm woman of much of the former drudgery of the farm household.[4]

On the whole, farmers have been slow to realize the importance of joint efforts in solving their problems of production. Many discouraging blunders have been made in the attempts to determine the best methods. But now a body of information has been accumulated which will prove of much aid to newer groups. The Grange, the Farm Bureau, and various other federations are active in aiding the development of the coöperative spirit and helping to guide new experiments along tried paths.

4. *Marketing*

We have already discussed the problem of increasing agricultural production by better uses of the soil, by new and improved crop plants, by control of the hazards of farming, and generally by better farm management. There is yet, however, another important phase of the agricultural problem to which we have given no consideration. This is the disposition of the produced crops, or, as it is usually termed—*marketing*.

As we have already pointed out, the primitive farmer is not vitally concerned with the problem of marketing until he has accumulated some surpluses of produce and has realized that there are other desirable goods in the world which he could obtain in exchange for some of his surplus. As new and improved methods of agriculture have been adopted, surpluses have increased and the problem of disposition has become more complex.

A city market. Farmers who are within trucking range devote most of their effort to raising produce that is salable in such markets. (Courtesy U. S. Dept of Agr.)

It was not such a long time ago that the principal marketing activity of the farmer consisted of an exchange of butter, eggs, cheese, smoked meat, or live animals with the country storekeeper for groceries, dry goods, and notions. The story of the gradual evolution of the market, agricultural and industrial, through varying vicissitudes and phases, would make an interesting story, but we are not primarily concerned with it here. Our concern is with the efficacy of modern marketing methods for the disposal of the produce of American farms.

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[4] Another chapter will discuss these matters more at length.

During a relatively large part of the world's history the producer and the consumer have lived close together. In fact, in many cases, the producer and consumer have been the same individual. With the coming of the Industrial Revolution and the subsequent growth of cities, the separation of the country producer and the city industrial worker, who is the consumer of the products of the country, has made necessary the growth of our great modern systems of transport. Without the devices of transportation small rural groups would of necessity still be confined to tiny self-sufficing areas. Each group would have to depend upon the immediate outlying territory for its food resources, which would be unable in most cases to support a very large industrial population.

For a time, man transported upon his back the few articles which he had to barter. Later, the domestication of animals presented a means of freeing himself from this burdensome duty. Canals and rivers were early pressed into service. But not until the invention and perfection of steam transportation did marketing reach its present stage of primary importance in the industrial system. Transportation may be said to include all the operations of transferring the product from the farm to the ultimate consumer.

These two pictures should explain why the farmers are interested in good roads. (Courtesy U. S. Dept. of Agr. and Lewis W. Hine.)

The farmer's immediate transportation problem is that of hauling his products by team or motor truck to the local market. If the distance is great and the roads are good, the truck offers the best method. In isolated districts everywhere the development of good roads and the coming of the motor truck have amounted to much the same thing that the earlier coming of a railroad meant to the plains of the Midwest. And it is easy to understand why the farmer insistently demands greater and greater expenditures for good roads. As a means of carrying produce to the market and supplies back to the farm, the motor truck is a relatively recent innovation with the farmer, but it is one from which we may expect great developments in the near future. It offers him a method of getting to distant markets and getting back to his work with the minimum expenditure of time.[5]

Raw materials, in the transportation of which speed is not a great factor, can be moved over inland waterways. We are just entering on a new era of improvement and intensified use of our long-neglected natural waterways. (Reprinted by permission of *The Country Gentleman*, 1929, by the Curtis Publishing Company, Philadelphia.)

Of all the methods of transportation used in this country, the railroad is by far the most important. The zone of production is extended not alone by the lowering of freight rates but also by lessening the time required for moving such produce as cannot stand delay. The use of fast freights for shipping perishable fruits, and the refrigeration of cars, have done much toward getting produce to the market in usable condition. To a less important degree, the use of heating appliances in transportation during cold weather has served the same purpose.

Water transportation is considerably older than steam transportation but at present is far less important in this country. However, it has certain advantages which should not be overlooked. Oregon and Washington apples are now being sent through the Panama Canal to the New York market. Water routes in this country might be utilized to a far greater extent than they have been in recent years. There is insistent need for the development of a national policy concerning water transportation. The opening of the St. Lawrence River so that ocean vessels may enter the Great Lakes and receive cargo as far west as Duluth, and the deepening of the Hudson River channel so that ocean-going vessels may continue up the river to Albany, are projects of great interest to the farmers as well as the manufacturers of the West.

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[5] Bettering transportation becomes important when we consider that about six per cent of the value of the crops, on an average, is taken to meet the expense of local and long-distance transportation service. Reduction of local transportation costs is dependent upon the construction of good roads for all-year hauling, upon more rapid methods of getting to market and back, and upon greater hauling capacity of wagons or trucks. In many sections of the country groups of farmers are developing collection systems whereby one of their own group or some one hired by the group daily or at regular intervals gathers and takes community products to the local market. This is a great saving, eliminating as it does the unnecessary trips of numerous individuals to market with part loads. This method is especially in vogue for milk and cream marketing. In the main the problem of freight rates is an involved one; a problem to be handled by individuals with special training and experience in this line. The large coöperatives have appreciated this fact and so have hired the best available talent to take charge of the routing and shipping of their products.

Storage is a supplement to transportation in the marketing process. It may consist of storage on the farm, at the receiving station, or along the route for grading and reclassification. The danger of flooding the markets at harvest time, especially in the case of wheat, or of overtaxing the transportation facilities, necessitates the functioning of some storage scheme. This storage scheme may start with the farmer who is able to store his wheat in steel or concrete granaries or even wooden bins conveniently built, and, possibly, equipped with power-driven fillers or arranged so that the grain can be handled at least one way by gravity. Or it may start with the elevators of the local buyer or miller at the railroad or the coöperatively owned local elevator. Besides enabling the farmer to place his wheat on a more stable market, wheat storage in a central place enables the farmer to receive warehouse certificates and obtain cash or credit for them. This he cannot do if he has stored the wheat in his own granaries. Besides the storage of wheat and other non-perishable products, there is much that can be done to eliminate waste and cluttered markets in the proper handling and storage of such articles as apples, potatoes, and vegetables. Again our storage problem here starts on the farm with proper storage cellars or buildings. The cost of such equipment, however, is much too great for the average individual farmer to support properly. The need may, however, be supplied by

Grading and packing apples for the market. (Courtesy Catlin Orchards, Montrose, Colo.)

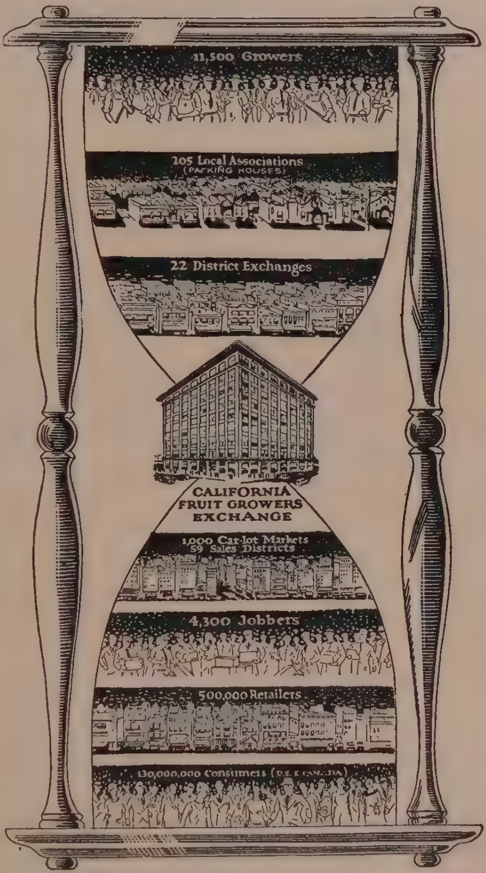
some local concern or by the joint effort of the farmers of a neighborhood.

A pile of containers for agricultural products. An opportunity for standardization here. (Courtesy U. S. Dept. of Agr.)

It is also necessary that farm products should be sorted, graded, and packed. A little consideration of the types of product which the farmer has to market will explain the necessity for methods of sorting and grading. Not only do the types of product differ, but even units of the same product vary in size and quality. As an example, we might cite the case of eggs which must be sized and candled. It is the exceptional farmer who produces so large a quantity of any one product that he can carry on the marketing process direct. Rather, most farmers have perhaps two or three acres of potatoes, less than a carload of apples, and varying quantities of vegetables such as cabbage and carrots; so it is evident that there must be some centralized agency for receiving these products from the different farmers, sorting and grading them, putting them into packages, and caring for their marketing.

Collecting milk and cream. The work of this man saves the time and effort of many who would otherwise have to make trips to a central creamery. (Courtesy U. S. Dept. of Agr.)

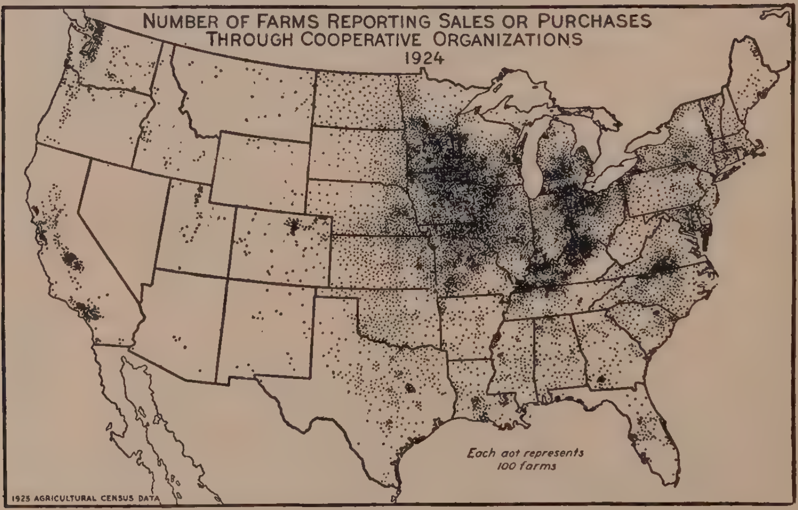
Grading decreases the cost of marketing by reducing to a minimum the quantity of product which must be transported or stored. Obviously, the shipping of unsorted, ungraded commodities would be a distinct loss to the farmer. First of all, the price offered for the ungraded commodity would be considerably less than that paid for a well graded, dependable article. The consummation of the marketing transaction is the purchase by the ultimate consumer; and so if an appeal can be made to this consumer by developing a standardized product with perhaps some trade name or other means of his knowing its dependability, an important step has been taken toward increasing the net return of the farmer. Grading saves the time of the consumer by enabling him to buy exactly what he wants. Another important point in regard to adequate grading and standardization is that it is possible to handle sales by description; and this saves much time and expense for both the seller and the buyer. Also, a well graded article stored under proper conditions furnishes a convenient basis for loans.



From grower to consumer California fruit passes through a series of concentration and dispersion areas which are roughly symbolized by the hour-glass arrangement pictured here. Note that the center of operations is the paper-work area. The elaboration of paper work is not the least significant feature of modern industry and marketing. (Courtesy California Fruit Growers Exchange.)

The method of carrying out these operations, that is, assembling, sorting, grading, and packing, depends upon the article, its perishability, and the economic position of the farmer producing the article. The farmer himself may be a large enough producer to maintain his own storage place, and if he has developed a sufficient reputation, may handle the marketing either by sample or by description. The assembling and grading, especially of a single commodity, may be done by some individual or firm in a central location, such as the local grain elevator in a small town; or it may be that the assembling is done by producers themselves, organized coöperatively for building a warehouse and hiring experts to take charge of the assembling, grading, and sale. There may be either small local associations or large groups such as the Citrus Fruit Growers of California.

Recently there has been a great development of these associations. The prune, raisin, and walnut growers are now organized. The cotton growers and tobacco growers of the South are following. A study of these really huge marketing coöperatives reveals that they have a single purpose—to market their commodity in such a way as to obtain the maximum return. Their general scheme of organization is somewhat as follows: Many producers of some commodity, such as cotton, eggs, or fruit, in a region are organized into a marketing corporation. Each member contracts to market all his produce through this corporation. Warehouses are built. Experts in grading and marketing are employed and the farmer has only to deliver his crop to his local warehouse or grading establishment and receive a warehouse receipt for it. He also agrees to endeavor to produce a product of a definite type. For example, when the egg raisers of California decided to attempt the capture of the white-egg market of New York, each farmer agreed to keep only white Leghorn hens. By this method a more or less standard type of product was obtained. This did not, however, eliminate the necessity for careful grading.


NUMBER OF FARMS REPORTING SALES OR PURCHASES
THROUGH COOPERATIVE ORGANIZATIONS
1924
Each dot represents
100 farms
1925 AGRICULTURAL CENSUS DATA

(Courtesy U. S. Department of Agriculture.)

As we view the operation of any of these large organizations, such as the Citrus Fruit Growers, we must not forget that their present well conducted and efficient organization has passed through long periods of ups and downs when many times failure seemed imminent. At present these organizations have on their staffs some of the best marketing experts in the country. One of their policies is to pay salaries sufficiently large to obtain the best service and counsel in the country.

There are still, however, many commodities which could be marketed in this same way. Wheat, potatoes, and sugar beets are commodities which would especially lend themselves to coöperative marketing. They offer, however, some difficulties which are the result, in the main, of the wide areas in which they are produced, and which, in some way, would need to be overcome.

The farmer can do much towards a better marketing policy by the study of general marketing trends, and by consideration of the business cycle and its application to his own problems. There are many opportunities now open to him to receive market information from day to day, such as the market letters sent out by the government and the more recent market quotations broadcast via the radio. The Department of Agriculture and the various state agricultural colleges are endeavoring to aid him in a better understanding of the trends of production in this country, and to guide his day-to-day efforts into the best channels possible.

Receiving market reports. (Courtesy U. S. Dept. of Agr.)

We see that the problem of raising the level of living involves not alone getting larger yields from his fields, but also utilizing the most efficient methods for distributing these products to the ultimate consumers. One of the chief disadvantages from which American farmers are at present suffering is their handicap as small concerns in a large-scale economic system. Their lack of control over the amount produced is in marked contrast with many other more highly organized industries. And this creates persistent surpluses of many products which, combined with the lack of ability to hold them for better prices, leaves farmers as a whole with a price disparity, long continued and serious. Thinkably this deficiency in organization might be corrected by the growth of large-scale producing units such as now are typical of the business world. This would at once tend to reduce costs and to enable farmers to secure better prices for their goods. And somewhat the same result might be gained by the development of a coöperative structure which would be analogous to Trade Associations in other business fields and would serve the same purposes. Many farmers and farm leaders have, however, not been satisfied with this prospect of slow change and have pressed insistently, in the years since the war ended, for governmental interference in their favor. Several proposals have been put forward, most prominent among them the so-called McNary-Haugen Acts. These we shall discuss later on.

5. *Erosion of the Soil*

Much can be done to improve the productivity of agriculture in all the ways we have mentioned: but the greatest danger and source of loss and the most important means of improvement have not as yet been mentioned. Already, even in our relatively young country, we have lost immense areas of farming land through soil erosion.[6] Prevention of further losses from this cause would be the greatest single means of aiding agriculture: perhaps the greatest contribution to national welfare which we could make.

Because this is a problem which is of the "long-run" sort very little attention has been paid to it. Mr. H. H. Bennett, writing in 1929[7] cites such of the facts as have so far come to light:

> Taking as a minimum basis of calculation 1,500 million tons of soil material annually washed out of the fields and pastures of the country, we find that the amount of potential plant food contained in this erosional débris, as determined by chemical analyses of the soils of the country, is 126 billion pounds, or 21 times the yearly net loss by the crops removed. The value of the principal ingredients in this wastage (the phosphorus, nitrogen, and potash) as determined by the cheapest commercial fertilizer carriers of these elements, is approximately $2,000,000,000. Of this there is evidence that the farmers of the nation sustain a yearly loss of not less than $200,000,000. Another part is a loss to the nation. Stream channels, harbors, irrigation ditches, and reservoirs are silted up, and more and more farm land passes from the productive to the non-productive class, or from the arable to the permanently non-arable class; and flood damages are enlarged by the increased amounts of silt and water entering the streams from the eroding slopes.
>
> When the surface soil is washed off, clay usually takes its place. This exposed sub-soil, which the farmer must now cultivate or abandon, is more difficult to plow, is less absorptive of rainfall, and loses that which is absorbed faster than the more spongelike humus layer now gone. The plant food in the raw submaterial is in less available form, and the farmer accordingly must use fertilizers or grow soil-improving crops in order to maintain his yields. Rainwater runs off the

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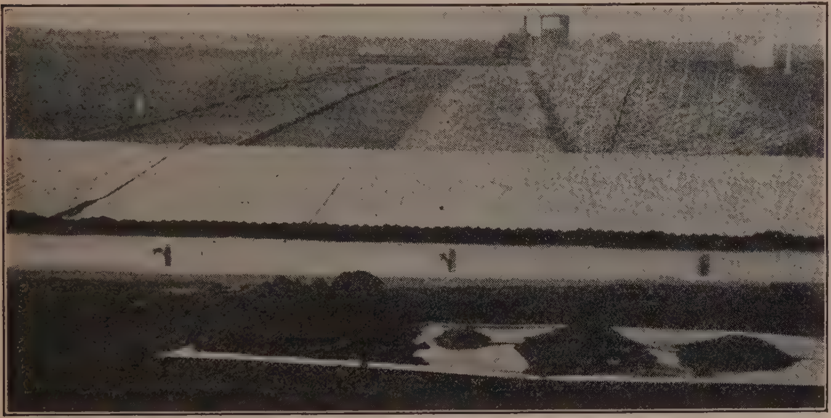
[6] Since its earliest cultivation American soil has been depleted by erosion. Sometimes it occurs in a fashion which involves immediate losses of considerable size; sometimes the losses are so gradual as to pass almost unnoticed for a whole generation. Illustrations of the kind of loss which is impossible to ignore will occur to anyone who was raised on a farm. Mr. Sandburg in his beautiful life of Lincoln recalls one which occurred in the Indiana boyhood of his hero: "It wouldn't be easy to forget that Saturday afternoon in corn-planting time when other boys dropped the seed-corn into all the rows in the big seven-acre field—and Abe dropped the pumpkin-seed. He dropped two seeds at every other hill and every other row. The next Sunday morning there came a big rain in the hills; it didn't rain a drop in the valley, but the water came down the gorges and slides, and washed ground, corn, pumpkin-seeds, and all clear off the field." (*Abraham Lincoln: The Prairie Years*, i, 28.)

[7] "The Increased Cost of Erosion," *Annals of the American Academy of Political and Social Science*, CXLII, 170 ff. (March, 1929). See also a more extended discussion, profusely illustrated, by the same author in *The Scientific Monthly*, August, 1928, 97 ff.

exposed impervious clay faster than formerly to increase the height and frequency of floods. An additional bad feature is that the erosion-exposed sub-layers are usually more erosive than the virgin soil, vastly more so in the case of those gullied areas having soft materials, as sand or silt, in the deep layers. . . .

In a single county of the southern Piedmont 90,000 acres of formerly cultivated land have been mapped as *rough gullied land* without value for cultivated crops. Once rated as good soil, this gullied area is permanently destroyed. It cannot be restored to arability, though it could have been saved.

In the southeastern Coastal Plain 73,000 acres of formerly cultivated land, including some of the best farm land of the region, have been mapped in one county as soil too gullied and too washed for further crop use. Gullies ranging to 100 feet in depth ramify broad areas where once there were fine plantations.



The erosional work of one rain: wash-off of surface soil material from a very mild slope at the Spur Station, Texas, shown in piles on the white cloth in the foreground, left to right: first, from a bare-ground plot, weeds removed without disturbing the soil; second, from grass plot; third, from grain-sorghum plot; fourth, from cotton plot. Erosion on this 2 per cent slope amounted to forty tons of soil material per acre with twenty-seven inches of rainfall. (Courtesy H. H. Bennett, U. S. Dept. of Agr.)

In the region comprising the excellent loessial soils of the lower Mississippi Valley there are counties having from 10,000 to 50,000 acres of land gullied beyond repair. Farming has been practically driven out of the uplands in some counties of this soil belt.

These wasted areas have developed since, not before, the wholesale clearing and cultivation of all kinds of land regardless of slope or soil. Deeply gullied fields characterize much of the Ohio Valley far back into the Appalachians. Along the Missouri and the Upper Mississippi farms are being abandoned because of the encroachment of gullies. In the unglaciated part of Wisconsin, the southwestern part, some farms have been ruined within five years. In one county of this region it has been estimated by the county agricultural agent that 60 per cent of all the farms have been damaged by gullying.

Land destruction by this process has been serious in many parts of the Southwest. Valleys with splendid deep grazing and irrigation soil have been completely ripped out by expanding ravines developed by erosion following overgrazing of the watersheds, or the valleys themselves, or both.

Probably not less than 17,500,000 acres of formerly cultivated land have been destroyed or rendered practically useless in this country because of gullying.

Bad as it is, it is not gully erosion that is doing greatest damage to our lands. Sheet erosion, that slower process of land washing which takes place more or less equally over the surface of entire fields, is the principal agent of land impairment. Its activities affect many times the area damaged by gullying. It goes on wherever there is enough slope for rainwater to run downhill, even in desert country where the precipitation is only three or four inches. On a 2 per cent slope in western Texas 40 tons of soil were removed from one acre with 27 inches of rainfall. Since fully 75 per cent of the cultivated lands of the nation are this steep or steeper, it can be seen that the possibilities of soil wastage are vast. While the washing will not proceed this rapidly on all soils, it will be serious, nevertheless, over most unprotected slopes. At the Missouri Experiment Station 40 tons of soil per acre were lost per year on a 6 per cent slope, and in North Carolina 25 tons an acre in the same time.

This is not so unusual or extreme a case of gullying as might at first be thought. Thousands of farms in the East have gone the way of this one. (Photo by W. R. Mattoon, Courtesy U. S. Forest Service.)

A single rainy period probably did more damage to thousands of fields in the region of silty soils of the Missouri River country above Kansas City during the fall of 1927 than could be corrected by a decade of crop rotations. More than 40 tons of soil were lost per acre from many fields of this region by sheet erosion during this one rainy season, and much of the young grain went with the soil. Nearly every depression made by the grain drill was converted into a small gully, and in places the wheel tracks grew into ravines 2 feet deep. A similar rainy spell came again in the same region in 1928 and doubtless did as much damage. At one place where a farmer had built an 8-foot dyke to keep the eroded matter coming out of the local hills off his fine Missouri River corn land the embankment was leveled up over a 40-acre field in 10 years. Here deposition took place over the entire field at the astonishing rate of 1,200 tons of soil per acre per year. The deposited material was less productive than the river alluvium it covered.

Already land is going out of cultivation in this region, which once consisted of some of the best upland soil of the United States. In a valley near the Missouri River a survey showed that 86 per cent of the upland area had lost from 8 to 40 inches of soil since clearing 40 years ago. Much of this is now so poor it has been abandoned to weeds. Even apple trees are dying on the eroded slopes.

In the Piedmont country, stretching from New York City nearly to Montgomery, Alabama, along the east side of the Appalachian Mountains, it is estimated that a soil layer ranging from about 4 to 18 inches deep has been washed off of about 65 per cent of the area of 50 million acres. Some two and a half million acres of this region, formerly cultivated, have been destroyed by gullying.

Of the 17 million acres in the Southern Brown loam belt (the region of wind-blown, or loessial soils) probably 8 million acres have lost soil to a depth ranging from about 4 to 20 inches, and about 3 million acres have been wholly destroyed or made economically irreparable as the result of severe gullying.

The Northern Brown loam region of Missouri, Iowa, Kansas, Nebraska, South Dakota, and Illinois, with about 18 million acres, has already suffered severely over some 9 million acres of its extent.

Unglaciated southwestern Wisconsin, with some 11 million acres, has suffered severely from erosion over probably not less than one-third of its extent, and it is further estimated that 250,000 acres have been ruined or almost ruined with gulleys.

The Red Plains of Texas, Oklahoma, and Kansas, a comparatively new farming region of 36 million acres, is one of the most severely washed areas we have. Unless great changes are made in the agricultural practices in this part of the country. it appears that we will soon have here one of the outstanding examples of land misusage and wastage in the world.

Land impairment by erosion in the West, particularly in the great southwestern grazing region, has been no less destructive than in the central and eastern states. Where there was good grass and herbaceous growth when the country was opened to grazing there is now, in numerous localities, very little forage. This is due to overgrazing and consequent removal of much of the soil by erosion following excessive diminution or destruction of the vegetation. As the result of this range depletion the number of live stock that can be carried has been greatly reduced for numerous areas. This is taking place extensively, not only on the 196 million acres of unappropriated, unreserved, and unregulated Public Domain, but on privately owned ranges and many of the Indian reservations. One sees and hears of "grazed-out" or "sheeped-out" areas all through this vast southwest country, under precisely the same conditions where, with proper regulation, the national forests have maintained excellent range conditions.

Not only are the ranges suffering and being ruined, but erosional débris from denuded slopes is filling irrigation ditches and reservoirs and covering fine irrigable lands of the valleys.

The Roosevelt and Elephant Butte reservoirs are silting up with material washed in from severely overgrazed portions of the watersheds; but the water users below are not alarmed about it, because at the present rate of silting several generations will be required to complete the job. That seems too long a time for concern to those who mistakenly think everything is all right until the reservoir is finally leveled to the top with silt. As a matter of fact, with a prolonged drought, such as has occurred in these regions, the water users would suffer as a result of the silting that already has taken place because of the lost storage capacity now occupied by the silt.

Exceedingly severe erosion and water losses also follow the burning off of the vegetation. Harding Reservoir in Orange County, California, is said to have been completely filled with débris as the result of a single rain that fell upon the watershed where a fire had destroyed the bush growth.

In a thickly populated district of the Southwest, costly concrete dams are being constructed as a means of flood control. The watershed above one of these was entirely burned over recently by a fire started from a lighted cigarette carelessly tossed among the bushes during the dry season. One heavy rainfall following this washed in enough soil, gravel, and stones to take up 10 per cent of the storage capacity created by the expensive dam.

Wool on the hoof: sheep grazing in the high pastures of Wyoming. The price set on their fleece will affect the price of everything into which wool enters. (Charles J. Belden, Pitchfork, Wyoming.)

Near by, from another burned-over watershed, so much sand was washed out into valuable orange groves that it cost the orchardists of a small locality $100,000 to remove the injurious deposit from about their trees. The cost in some groves amounted to $1,200 an acre, or half their value.

Rough estimates, the only kind that can be made in the present absence of accurate measurements, indicate that not less than 125 million acres of our farm land have been severely damaged by erosion, much of this having lost from 3 to 20 inches of soil from the surface. Many areas have been washed to greater depths. A large part of this eroding area is still in cultivation.

Costly washing, also, has extended out over 125 million acres more, and is getting worse all the time. Most of this is in cultivation. An undeterminable large area formerly cultivated has been abandoned. Part of this has been destroyed in so far as having value for crop production, some is being restocked with trees, and much is partly covered with worthless bushes, scrubby trees, and coarse grasses.

Face to face with this situation the question is what we can do about it. Concerning this Mr. Bennett suggests that:

From the statements and estimates above it can be seen that the problem of erosion is not only one of extreme gravity, but a problem the nation has taken very little interest in. The country has been very much asleep about the situation, with the exception of certain areas in the southern states.

At the present time numerous areas, large and small, are being cultivated throughout our farming regions, which are entirely too steep and erosive for safe tillage, even with the best protective measures that we know. These, of course, should be used only for trees or permanent pasture. In a little while it will be impossible to use them for any other purpose, as they will automatically pass beyond possibility of cultivation. In parts of the Appalachians steeply sloping ground is still being cleared for cropping where the farmers know that it will wash to bedrock within three or four years.

On the other hand, vast areas of eroding lands are in cultivation which could be given efficient protection with cheaply constructed field terraces, or contour embankments. This implement of soil conservation is being extensively used in parts of the southern states. In 1927, 494,000 acres were terraced in Texas alone, and a drive is on to largely increase the yearly program. The farmers there have seen what terracing means in saving fertile soil and in storing moisture in the ground for subsequent crop use. . . .

Erosion can be prevented. This system of dikes shows one way of saving the precious topsoil. (Courtesy of H. H. Bennett, U. S. Dept. of Agr.)

Terracing has been emphasized as a means for saving soil and water because we know that these structures are effective for many kinds of land, and also because they can often be cultivated over about as easily as any other part of the field. There must be employed, as a matter of course, various types of dams and flumes to check the expansion of various types of gulleys. Grazing must be regulated on the ranges and in the pastures. Trees and grass must be resorted to in order to save the steeper slopes. Certain vines, grasses, and trees will be needed to hold some eroding areas. Even chemicals may be needed in some instances. And there is need for devising better terracing implements. And there is vast need, also, to obtain the fundamental data relating to the physical processes involved in erosion: why some soils erode faster than others; why a terrace that functions admirably in one place fails in another with the same slope and rainfall. We need to know what is happening to the vast area of formerly cultivated land now lying idle. Additional information as to the relation between eroding lands and floods is sorely needed immediately.

The task of putting chains on the evils of soil erosion on a large scale is going to be a very difficult one. It is going to tax our best efforts, even with widespread coöperation of soil scientists, engineers, practical agriculturists, the extension agencies of the nation, bankers, merchants, and railroads. Delay will only accentuate the difficulties because erosion gathers momentum as the surface soil is removed.

6. *The Problem of a Permanently Productive Agriculture*

This problem of erosion is one of those which can be solved only in part by individual initiative. For more complete control some sort of social action is necessary. But social action is necessary, as a matter of fact, to the solution of the whole problem of agricultural relief which has been so prominent in the public discussions of recent years. There are immense areas of uncertainty with which anyone must deal who concerns himself with the likely future of such an activity as farming in such a region as the United States. These areas may, however, be to a certain extent reduced by bringing to bear the generally available experience of other regions which are in stages beyond that which we have reached. It is not necessarily true that evolution here will be identical with that of other regions; but there is some presupposition in favor of it. And since we seem driven to speculate about a desirable program for relief we ought not always to evade the fact that commitment to any program will also be a commitment to one kind of a future rather than another.

The technique of farming is like any of the other industrial arts in this: that it comes to be taken for granted without fundamental examination. And those who are engaged in it, when they ask to have their hands upheld, are as apt as others to resent any and all criticisms of current practice. They want their occupation made profitable as it is; they do not want it changed. And because any group which is determined can, under our legislative system, make itself politically formidable, there is not likely to be much exploration of causes or of more desirable modes of operation. But these cannot long be hid, especially if some costs to others in the community are involved—as they are in farm relief. And a backward agriculture is no more likely to succeed in the long run than those industries were which attempted to turn back the rising tides of the efficiency movement in industry. When ideas are the enlargement of facts they seem to have a will of their own to succeed. And agriculturists who repel them will find themselves in the same ultimate dilemmas in which old-fashioned industrialists have squirmed during the past few decades. State help which only fell short of outright subsidy could not bring relief to inefficient manufacturers; it could not even prevent whole backward industries from falling into desuetude. It will be no more successful in this other industry of agriculture.

It must be granted that farming has suffered many and grave disadvantages and even that there have been discriminations which operated to make it unprofitable. These ought by all means to be corrected. Yet it does not follow that the industry ought to be supported indiscriminately. There is at least a presumption of technical weaknesses which ought not to be encouraged; and, taken as a whole, it cannot be said to be entirely suited either to our soils and climates or to the needs of our people.

Harvest in the great Northwest. This is one-crop, extensive agriculture in its most extreme form. The agriculture of the United States ranges all the way from this to the market gardens of New Jersey. (Wide World Photo.)

Some light on these problems can be had by taking a general look at the evolution of farming as a national art. If, for the sake of illustration, we take in at a glance the advanced, the middle, and the backward agricultural regions of the world, we see that there is first a stage when crops are grown spasmodically on land which is then abandoned again to nature for an indefinite period. In such times and places not much pains is taken with cultivation and there is no attempt at the maintenance of fertility or of conservation of the topsoil. It is in no absolute sense a primary stage of agriculture, but it is a first stage of cultivation. Whether or not tools and machines are used, it is something which is primitive and transient. A good deal of our West is, speaking in a technical, land-use sense, no more advanced in the art than many regions of the world were hundreds of years ago. Much of Manchuria, most of Siberia, and vast areas of South America have not progressed further than this.

A next stage might be distinguished as one of settled crop growing joined to animal husbandry. Rotation is practiced, fertility is guarded, cultivation comes to be studied. Typical crops are the cereals, the roots, and the grasses. The main distinction of this stage as over against the preceding one is the feeding of cultivated grasses, roots, and cereals to animals on a large scale and the use of animals and animal products as sources of cash income. Most of the Eastern United States is in this stage. So is European Russia (though with a difficult and backward land organization which is rapidly being changed) and a good deal of Eastern Europe.

A modern dairy barn equipped with the latest devices for saving labor and for producing clean milk. This herd would produce certified milk. Not many dairy barns have been brought up to this standard as yet. (Courtesy U. S. Dept. of Agr.)

The further stage to be seen most prominently in Western Europe, but also in some limited regions of the United States such as Eastern Pennsylvania, the Puget Sound country, and the farming region which centers in Ohio, is an intensification of this trend. Cereals are reduced in acreage, as are also roots, and the area thus freed is devoted to legumes, technical crops, and grasses. A far greater proportion of income is received from animal products; indeed a point is reached when nothing can afford to be grown but animals, along with some technical crops and fruits, for cash purposes. The whole of the farming operation comes to center in husbandry—largely of cows and swine, with poultry and sheep as secondary resources.

These developments can be seen to be happening. It is interesting from our point of view to note that the United States exhibits every stage, from primitive to most advanced. In view of this lack of homogeneity, more of a problem with us than with almost any other nation, difficulty might, at the outset, be expected in the attempt to frame any program which would meet all the needs or satisfy all the demands. And in reality the relief measures of the last few years might well have become law if at any time it could have been shown that all the farmers were agreed on a plan. There was much dissension; and there was consequent weakness at critical times. There is no such difficulty in such countries as France, Germany, England, or Denmark. France and Germany, for instance, exhibit a wide variety of soils, climates, and cultures, but the technique is far advanced and, except for special conditions in high altitudes and in regions devoted to market-gardening, answers to the tests of intensive animal culture, reduction of cereal crops, and increase of fodders. These would have gone further, also, if wheat, particularly, and some other crops, had not been carefully protected from external competition. Those who are studying such matters in these countries see well enough the logical end of present developments. What they are wondering is what comes after. For, in spite of advanced cultivation, and continued government aid, agriculture in most of the countries of Western Europe (Denmark alone excepted) is economically depressed and a continual source of worry. We have our own depression; but we have yet to enter the stage which precedes this uncertain something new. In Europe they are wondering whether their farmers all will soon be gardeners; or whether larger estates, more impersonal and expert management, and greener fields will not emerge—or, perhaps, as seems likely, both, each in its own area. At any rate, this most advanced region is also on the threshold of reorganization. But we move still toward the cereal-reduction and grass-increase stage. A recognition of this immediate trend (in our most important farming regions) is, for the moment, more important to us than speculation concerning a more removed future.

A producing orchard. The investment that must be made is very heavy before returns begin to come in. (Courtesy U. S. Dept. of Agr.)

It is interesting to speculate, however, on the differences our current practice would show if we had attained the stage of development toward which we seem to be moving. First of all, there would be less cultivation. Crops which called for extensive baring of the soil would be greatly reduced. It will be said that cereals require this; and that cereals are necessary for feeding animals; they cannot, therefore, be eliminated even though none of them were used directly for human consumption. It is true that cereals must be grown somewhere in the world so long as our present diet for animals and for people remains unchanged. It is significant, however, that the great cereal areas have usually been also the backward regions. The more advanced a nation is in agriculture, the less its good lands are devoted to wheat—unless there is artificial support, as in France at present. The prominent exception to this is the Corn Belt of the United States, where our choicest lands are seeded to corn. But this can be explained, if one wishes, by a double accident of time and geography. Our corn lands happen to lie between the ranges of the West and the market centers of the East; the soil happens also to be deep and new. It seems inevitable that as time passes and the elements of human geography change, a revolution will have to occur in the Corn Belt.

At any rate, this exception does not seem to disturb the rule that cereals find difficulty in surviving under advanced conditions. The vast plains of Siberia, and of South America and Africa, will, probably, during the next century, be the great sources of wheat. The United States will turn to the many superior types of grasses and legumes which are already available but so far not very extensively grown—particularly the modern varieties of one very old plant, lucern, which we call alfalfa. The rôle of alfalfa in the future of American farming may easily be far more important even than corn is at present. It is true that the soil has to be exposed for planting purposes, but only once in several years, depending on the soil and climate, and constant stirring is not a feature of its care.

Efficiency in handling has been very difficult to develop with corn; it promises to be less so for alfalfa. Once the attention it deserves is centered on this crop by mechanicians and chemists the remaining problems will be solved with ease. When we know how to dry and transform it quickly into a concentrated and transportable commodity on a large scale it will quickly come into its own as a practical and universal commercial crop. But the greatest benefit which would come from its substitution for corn and wheat would be a social one—the prevention of erosion. For this it is incomparable.

It is seldom that one generation suffers the full penalty for soil washing; the topsoil vanishes too slowly to make its conservation a constant and immediate care in cultivation. It becomes, therefore, one of those social problems which are so very difficult to solve under our prevailing system of individual enterprise. Yet there is no single danger confronting the United States to be compared with it in ultimate consequence if immediate steps are not taken to assist in its preservation. And it will easily be seen that the more rapidly we move toward permanently covered land the more relief we can feel. If some practical and profitable system of culture offers itself which will gain this benefit for us we can feel fortunate. It seems a lucky circumstance, indeed, that the trend of agriculture, motivated by other forces, seems to hold out this hope also.

It is not only our prevailing hilly contours which has made soil losses greater for us than on the flatter and heavier lands of Western Europe. The character of our rainfall is also different; it comes in deluges. And, as anyone can observe who travels through the countryside, we have been extremely backward about putting into practice contour cultivation. Our orchard practice has been likewise more intent on immediate returns than on conservation. In consequence orchards are almost universally cultivated, the land being bared throughout the whole year. Tree crops are certainly a distinguishing feature of a permanent agriculture; but of a sort we have not yet developed. Fixed orchard lands are less frequent in older countries. Trees will grow where other crops will not; and this is where they should grow. But also we might gain immensely by adopting what Professor J. R. Smith has been calling for years "two-story agriculture," meaning simply that other small crops will grow under producing trees without loss to either. This applies to nut as well as to fruit crops. Our method of fixed orcharding with continuous cultivation will certainly need revision. Another great source of waste has been the useless destruction of forests and wood lots. Much of the land our ambitious ancestors cleared might better have remained forested. This applies particularly to steep slopes and to poor soils. We have now much reforesting to do even in places where forests are not usually thought of as characteristic of the country.

"Two story agriculture": a grove of pecans with corn beneath on well drained fine sandy loam, with sandy clay subsoil (Norfolk fine sandy loam) near Wiggins, Mississippi. (Courtesy H. H. Bennett, U. S. Dept. of Agr.)

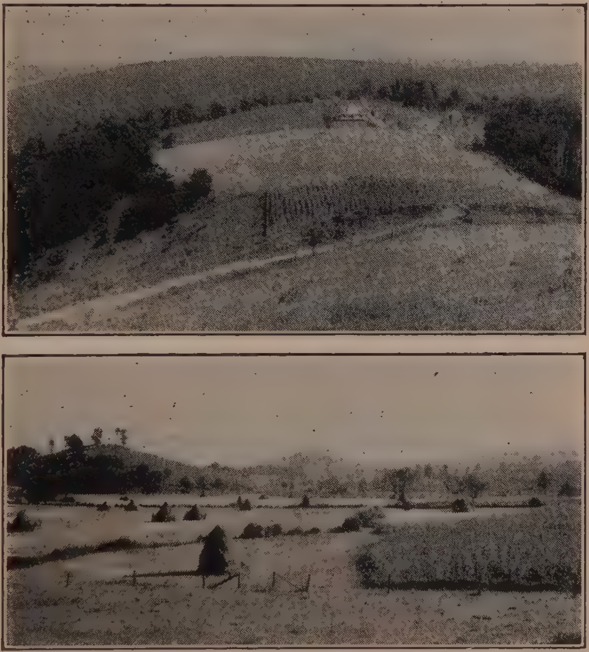
This sums up a few of the changes which seem likely to occur, both because they have happened in more advanced systems and because common sense indicates that we should be better off if they occurred. But there are still others. Machine technique must not be overlooked. We have passed the time when any system of land use will have a chance to develop which calls for more rather than less handwork. And agriculture will have to be made more amenable than it has been in the past to the substitution of machines and power for men. But here again, as in the case of the prevention of soil losses, alfalfa and similar crops seem to possess great advantages. The preparation and seeding of land and the harvesting of grasses can be reduced to much simpler elements than can the similar cultivation of any crop, except, perhaps, wheat, on lands where combines can be operated. But for really practical operations it is necessary that drying and chopping be done almost in one operation with the harvest. We have the beginnings of such machinery. It may be expected to develop and to spread very rapidly.

But there is another condition which must be met. It has often been remarked that no other business could carry the terrific burdens of overhead cost per unit of product which are characteristic of farming. Barns with much of the space wasted for a good part of the year, machines used on a few acres and for a total of eight or ten days in the year, many of them are quite usual. Because farm operations are small and because cost accounts are infrequently kept, the real size of this burden is not appreciated. Great gains could be made in reducing these costs, as well as in making a manager's brains and effort spread itself over more units of product, if the size of our farming operations should be greatly increased. There must be some revision of the size of holdings; but also, the confining of field operations to more favorable terrains must take place.

Dusting cotton with calcium arsenate to reduce the ravages of the boll weevil. By increasing productivity the farmer hopes to increase his income. (Courtesy U. S. Dept. of Agr.)

There are comparatively few farms in our typical mixed-farming region where more than half the acreage ought to be devoted to field crops, especially with several generations of soil washing having passed. Just how this necessary reorganization can be brought about without some exterior control or direction it is difficult to see. What might be profitable from the individual point of view—or, at least, what each farmer might think he had to do, which is to get as big a profit out of his one, two, or even twenty-year tenancy as he can—might not be at all the thing which would seem advisable socially. Yet somehow we seem forced to make revisions in these respects. The operating units of the future must be larger than those of the present, and much of the land now in use—east of the Mississippi, at least—must be abandoned so far as field crops are concerned. It ought to be devoted immediately to forests again, partly because we shall need tree products in the future, partly because it helps to prevent soils in the immediate neighborhood from washing, but partly, also, because immense and widespread floods have become a problem in themselves, and one, evidently, of national importance. This is the only way they can be controlled, permanently.

It is often said that economic forces will bring about these results—that whatever crop is most profitable will be grown, and that the most desirable practice will, because it is most advantageous, be adopted sooner or later. There are reasons why, in agriculture, this simply is not a true description. The social interest frequently, as we have seen, runs contrary to that of individual operators. Or, it may be that the time element defeats good results which otherwise might take place. Practices which might be socially desirable as well as profitable to the farmer are prevented from adoption simply because pressures on him are too great to allow of conforming to long-run trends. A farmer who looks forward to a few years of tenancy, or to selling his holdings in the near future, will not be led, by his expectation of profits, to plant trees which require forty years to mature, nor to prevent erosion, which takes a generation to ruin his fields. Nor has farming in itself ever been a sufficiently profitable occupation to tempt capital and enterprise on a large scale. A dozen miserable farms, which pay their operators poor returns, might be made, if they were combined and expertly managed, to yield a good return. But not unless a whole generation, perhaps, were the period to be allowed for the experiment. And this is not attractive to private enterprise as we know it in America. The question is whether the results, in the conservation of resources and in the rehabilitation of our declining rural life, are sufficiently important and sufficiently certain to justify governmental interference. No one can be prepared to say offhand, though it is easy to criticize quite justly our present methods. The really disturbing



Farms on steep slopes and narrow ridges lose their soil easily and quickly. The stones come to the surface and crops become scanty. Cultivation ought to be limited to flat valley lands—in the long run it will have to be. A permanent agriculture will use slopes for trees and flats for crops. (Courtesy U. S. Department of Agriculture.)

thing is that this whole range of considerations never enters any discussion of proposals for relief. The changes referred to may take place within a hundred years if there is no interference. But there seems no escaping the fact that by then we shall be immensely poorer in many ways than we should have been if we had moved in some fashion to construct and pursue a well-defined, even if a flexible, policy. There seems, it must be admitted, little chance of any such activity, but there is no good reason—except a human one—why it might not happen.

The probabilities for the new agriculture are, then, that there will be more legumes and grasses, and a reduced cereal culture, particularly less corn; it will have more animals in larger groups; it will have more trees, especially of the food-bearing sorts; it will be carried on in larger units, but on less land and with a smaller personnel; it will be more highly capitalized; there will be fewer proprietors and more workers. If all this can, for the moment, be admitted, there are a few subsidiary generalizations of some interest. One of these is that the American farmstead system, which sets our agriculture off rather sharply from that of Europe, and which has been vigorously defended as making for self-reliance and efficiency, may turn out to be a handicap. We may have something which will, superficially at least, look like the peasant village of Europe, a center of agricultural and subsidiary manufacturing operations, with homes for workers and for resident pathologists, veterinarians, and managers. The fields about are likely to be wide and unfenced, since animals are likely to be confined for the most part, and since freedom of movement will be a serious consideration for the immense machine-units which will come into use as the scale of operations increases.

All this, if interesting, is a highly general and speculative picture. The new agriculture will not develop to fit any fixed and rigid delimitations such as may be suggested here, but will create its own forms and social conditions. There is no harm in projecting the conclusion of present trends or the results of desirable developments, but it is more important to ask immediate questions. Some of these will occur to the reader at once. Is the cereal content of our diet likely to decrease? We had been thinking of cereals as a very beneficial substitute for meat. What will become of the cotton and tobacco crops, not to mention such others as the cultivated roots, including the potato and the sugar beet? And what is to happen to the usual American rotation which includes, besides a legume, wheat and corn?

There is no doubt that there would be immense resistance to any reduction in the cereal supply for human food. Yet we may get that supply from other and newer regions of the world. They will certainly be cereal producers for a very long time to come. It is just as well to keep in mind the briefness of the period, historically considered, during which cultivated cereals have been a major dietary dependence for Western Europe and America. We could, if we had to, get along without them again, though, so far as we can see now, it would be difficult. Something will have to be done, in time, for a hundred or two years is a long time for land to have stood up under cereal cropping.

Corn, of course, is the worst of the lot as a soil waster; winter wheat is perhaps the best. It is significant that Western Europe has never tried to grow corn extensively in spite of its great advantage over wheat in yield per acre. We usually assume that the reason for this is a climatic difference. But this is not the whole explanation. The hot midsummer nights of the Corn Belt are advantageous; but corn can be grown in Europe and can be made to average at least twice the yield of the best wheat. The real reason for its failure of wide adoption there is rather the expense of its cultivation. In this Europe has been fortunate; it has saved inches of precious topsoil which could not well have been spared. And we in America are fatuous, indeed, if we suppose that the cost of our nearly three billion bushel crops year after year has ever been registered in statistics. But corn is only just worse than wheat in this respect, and probably not so bad as cotton or tobacco, raised on the light soils of the South, and in markedly hilly country. What about these? One hesitates to suggest that we may have to consider seriously a reduction of the acreage given over to such economically necessary crops; it may, nevertheless, turn out to be so; and we could start by saving the hillsides and confining the most intensive cultures to lands which are as flat as possible.

A good herd of Holsteins. A considerable part of country work consists of tending live stock.

It may seem strange to insist on these considerations; it would probably seem strange to talk of restriction at any time before 1950. After that we shall be in a position where we cannot escape—from sheer necessity. We do not often enough stop to think that modern agriculture is scarcely a century old in most parts of the world—even in Western Europe and the British Isles. We do not know how long soils will survive their prevailing uses. Well used, tended, and restored, there is every reason to believe they will last as long as mankind; but we have cut off the forests; and for months of every year we expose a large part of the land to the elements. It is not use we have to fear, but abuse. In this, America is the world's worst offender; we have scarcely had time to be made sorry as yet. But the time cannot be far off.

It is perhaps not irrelevant to refer again to *laissez faire.* For modern agriculture was and is organized according to the scheme of freedom of enterprise individually directed and independent of supervision from any authority higher than its owner. The exploitation of the land has gone on in this way so far without unbearable social penalties. But the applicability of the idea to agriculture has its obvious drawbacks from the social point of view. It seems strange that this industry, in which the social interest is so strong, should be so dedicated to individualism as to preclude any watching over its custody of our resources. There is no denying the backwardness of agriculture; there is no doubt that we know ways to improve it; there is no question that immense wastes take place which it is hard for the community to view indifferently. Yet an idea, a doctrine, stands quite solidly in the way—never more solidly than at present.

We shall not, in our generation, be witness to great changes. The forces which affect agriculture do not come in revolutionary ways; they are measurable in decades rather than years. And it is when we regard the changes which may happen in half or three-quarters of a century that problems become clearest. For the sake of illustration, the reader's attention might, for instance, be invited to the history of Virginia or of Massachusetts. The rôle of Virginia in our history has been distinguished. Her richness was, for at least a century, traditional. Her fields helped to support the Revolution; and her Great Valley, so late as the Civil War was called the "granary of the Confederacy," and as such was a focal point in military strategy. Her eastern counties are spread with manor houses, mostly fallen now into significant ruins. One who forms a notion of what Virginia soil must be, by reading the records of her past, ought never to visit her now without some preparation for disillusion. And where has her richness gone? Down the furrows of her fields into her creeks and rivers and so to the sea. And the same is true of Massachusetts—and of most of the rest of the Eastern Seaboard where sloping lands prevail. It has not yet happened in Ohio, Indiana, Wisconsin, Iowa; rather, it has not gone so far. But there is nothing to prevent such devastation there as well. The soils of the Mississippi Valley are deeper, the contours, for the most part, not so rolling. Yet fifty years more of corn and wheat will do for Illinois and Kansas just what was done by similar cropping to the farm lands of the Eastern Appalachian slopes.

It has already been said that the kind of farming in Western Europe shows fairly clearly the evolution of the art; and that its chief characteristic is that it tends to become greener, to include fewer acres of cereals and other highly cultivated crops.

It may be asked why such an evolution has not occurred in New England or New York, whose farms are, in most senses, quite as old. The answer to this is that there has been some change; but that the continual competition of new and unwasted lands has prevented its going forward so rapidly as in Europe. It is not, perhaps, in the Middle West that the most advanced farming is done; but in Eastern Pennsylvania and the better valleys of New York and even Massachusetts. This, however, has been a progress achieved under difficulties. For Eastern farmers whose lands began to show signs of exhaustion during the nineteenth century always had the alternative of going West. It was characteristic of several generations to migrate toward virgin lands where the customary farming could again be made to pay. But there are no more such areas. And in the next half century we may look forward to such a change as has happened in Europe. It is surely fair to ask whether we ought to support, by Federal aid, a kind of agriculture which will ruin the last good land we have. There is some significance, perhaps, in the fact that the support for the McNary-Haugen measures came from this West

In the Philippines, these elaborate terraces provide land space and prevent erosion. This is the extreme development of a principle which, in modified form, is applicable to many of our hilly regions. (Courtesy of H. H. Bennett, U. S. Dept. of Agr.)

whose type of agriculture is least advanced, even though it might be shown to be most profitable.

It would be a mistake to conclude that rural statesmanship in Europe has been wiser than ours. In general, outside of Denmark and Germany, it probably has not. France has, for instance, persisted in using every possible means to prevent the decline of wheat acreages; and England is giving bounties to growers of sugar beets. Both these are, from a general—rather than a narrowly nationalistic—point of view, mistakes. France probably raises twice as much wheat as she ought; that is to say, her land might more profitably be used in other ways. The same is true of England and her sugar beets. These things are well enough known; but politico-military reasons are judged more important than low prices or land conservation. The hardships which the European population bears in this cause are not easily justified by any reflective tests. But they are even less justifiable in the United States. We are, in fact, because of our wide area and our variety of soils and climates, in a better position than any other nation (excepting Russia) to view the probable and desirable futures, to set them off against each other, and to enter on a program of conservation and wise cultivation for which posterity, if not the present generation of farmers, would have cause to thank us—better, that is, in every sense except that of the willing-

Sheep on a western range. There is a wide strip of country east of the Rockies where rainfall is so scanty that cropping is difficult and whose main use is for cattle and sheep ranges. (Courtesy U. S. Dept. of Agr.)

ness to do so; by tariff protection and otherwise we seem to be about to repeat not only the evolution in technique of Europe, but her political mistakes as well.

It has not been intended, in what has just been said, to imply that we ought, forthwith, to attempt the drastic restriction of cultivation, nor to revise our practice in any other definite way. These things are matters for long consideration and careful counsel. It has been intended, rather, to point out that there is a whole range of problems which are being overlooked even when we seem about to adopt policies which will certainly affect their solution in one way or the other. And it is not necessarily unwise, even without further documentation, to ask consideration for the certain decimation of our soils and the continuance of farming practices which may soon be, if they are not already, obsolete. The easiest specific measures we could take, and which seem quite certainly desirable, would be to arrange for lessening the cultivation of our hillsides, for covering our exposed orchard soils, for encouraging the growth and multiplied use of alfalfas, for increasing and intensifying our animal husbandry, and for the planting of millions on millions of trees wherever cropping has wasted the soil or wherever forests have been cut from lands obviously suited only to the culture of trees.[8]

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[8] "Farm Relief and a Permanent Agriculture" by R. G. Tugwell in *The Annals of the American Academy of Political and Social Science*, CXLII, 291 ff. (March, 1929).

SECTION C

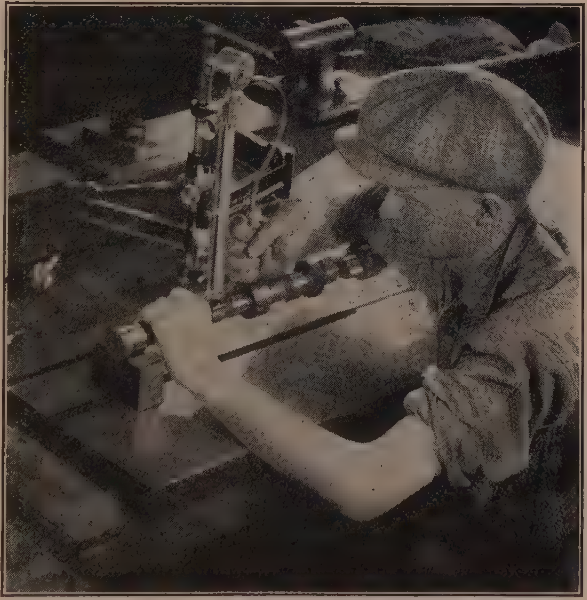
URBAN PRODUCTIVE EFFICIENCY

CHAPTER 12

INCREASING PRODUCTION BY MORE EFFECTIVELY USING PHYSICAL SCIENCE

1. *Man and Physical Science*

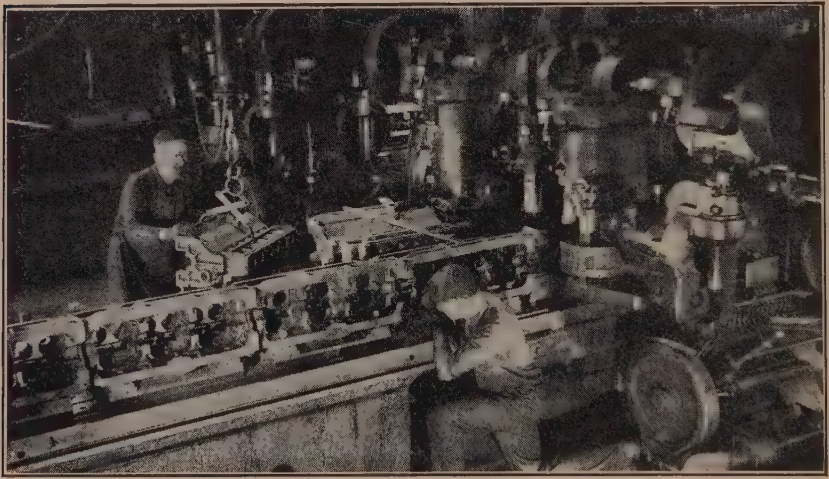
If we could, by some magic, turn time back and view the early struggles of prehistoric man, we might perhaps find him delighted over the discovery that by the use of a pole as a lever he could roll a rock to the mouth of his cave and so protect his few supplies while he was away at his hunting. Or we might find another of his contemporaries equally delighted over the accidental discovery that a section of a round log placed under heavy objects greatly facilitated their being moved. Out of this latter experience the wheel eventually evolved. And it is so that the primitive inventor experimented and manipulated until he had developed many other new devices.



(Courtesy of Olds Motor Company.)

It was not until he had had some success in this, crude as the new tools were, that he was really on the road toward a solution of his problem of securing more food, more clothes, and better places to live. But it has been a far cry from the time when the simplest modifications of the lever, the wheel, and the inclined plane constituted the working tools of society up to the present age of machines. We are so surrounded by these things now that we have ceased to marvel at them.

The efforts of certain spirits, motivated either by desire to obtain assistance in their work or by sheer love of manipulation and invention, gradually laid a foundation for the coming of a new era, an era when the necessities of life were to be had in far more generous quantities. Industry, which, in a sense, is merely the multiplication of tools, slowly assumed an important place in the economy of mankind. Many now turned from herding and sowing to mining, forging, and weaving. While kings and prime ministers busied themselves with wars and intrigues, artisans were combining and recombining wheels, rollers, pulleys, and belts. Bit by bit were added the elements which were to make possible the Industrial Revolution. Levers, inclined planes, and wheels in new and changed forms ultimately evolved into the steam engine, the loom, and the printing press.



(Courtesy Olds Motor Company.)

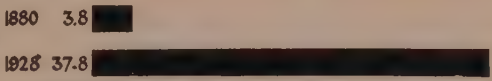
At first man was himself forced to supply the power for the devices which he had invented. But the same urge which had brought about these inventions prompted him to find a source of power to supplement his own energy. It was but natural that he should harness the animal which he had domesticated and which had hitherto supplied him with meat or leather, or had perhaps been utilized for transporting light loads or pulling crude plows. By means of treadmills and sweeps, the horse, the goat, and even the dog could furnish power necessary to pump water on to the field, to crush sugar cane, or to grind grain. Man had indeed now entered a new era. He possessed machines to do laborious jobs better and easier than he had been able to do them; but, more important still, he had contrived in large measure to release himself from the necessity of furnishing the power to work these machines.

Not even these great attritions upon Nature satisfied the inventive faculties of man. He had discovered that the sail on his boat would eliminate much of the tiresome labor of rowing or paddling. Why, he asked himself, could the wind not be harnessed to his pump and mill in place of his horse or ox? So he fastened sails to extended arms in such a way that the wind caused them to revolve—and the ancestor of the modern windmill was complete. It was not a long step from the utilization of wind power to the harnessing of falling water. Man now had sources of power which were capable of running his machines much faster than the animals could and so would pump more water or grind more grain; in a word, enable him to live better.

He had by this time begun to appreciate more fully the world about him. He had ceased to fear the wind and the waterfall as the manifestations of some unfriendly power, since he had harnessed them to his machinery. As a result of his experience he had slowly come to a more realistic appreciation of the world about him. Otis T. Mason, the American anthropologist, has listed the factors involved here under the following five heads:

Raw materials of almost endless variety and usefulness;
Motive power from simple muscular energy to the most complex forms of force;
Tools and machinery in ever-changing types;
Processes of fabrication, simple, complex, and compound;
Products, things sought for, with which man nourishes and supports his life.

The invention of new tools and machines necessitated the harnessing of new power sources. The use of new power sources usually necessitated greater refinements in existing machines. Fickle winds might not blow for days; consequently pumps often lay idle and fields became parched. The stream which tumbled down over mountain precipices might be far from the place where its services were most needed. The solution of these and many other problems came through the harnessing of another force with which man had long been familiar—fire. It had been used to warm his house and cook his food; also it had found uses in smelting and working metals; but never yet had it supplemented the energy of animal, wind, and water power.



Production of pig iron in millions of gross tons, United States. The Industrial Age was founded on coal and iron; it still rests there, though there are signs of change. The contrast of 1880 with 1928 is a fundamental view of the way the world has changed since then. (Data from U. S. Census Bureau.)

It needed a Papin, a Newcomen, and a Watt to find the means of utilizing the potential possibilities of fire. And from the early efforts of these men a source of power developed which was to alter the whole structure of society and bring about one of the most far-reaching changes yet experienced by mankind. With coal as the source of fuel energy and the steam engine to transform this energy into available power for the mill or mine, industry found itself freed in large part from the whims of the wind. Man no longer needed to construct his factory near the waterfall, if the fall happened to be situated where other conditions were unfavorable for his work.

2. *Power and Its Possibilities*

A survey of the power sources being utilized in the world today would show the following three general classes: (a) muscular power of men and animals; (b) energy of the wind and flowing water; (c) energy of fuel. The third one, energy of fuel, is, perhaps, the most important in our present industrial organization, whether in the form of steam, gas, electricity, or compressed air.

A crude pump used for supplying water to a rice field. Compare this with such irrigating equipment as exists in our western valleys. (Photo Ewing Galloway.)

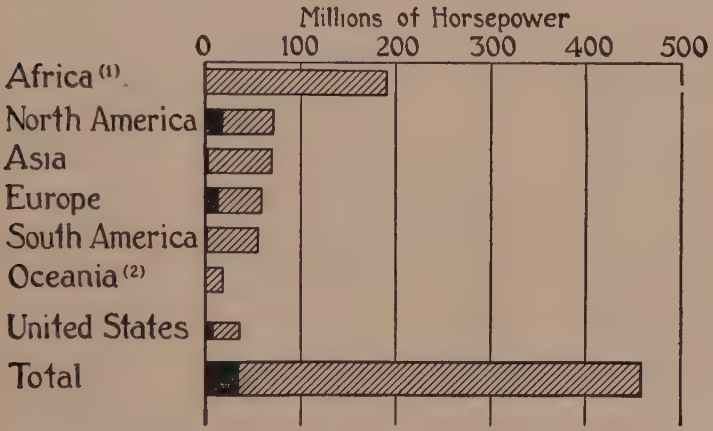
The principal source of all energy is the sun. Food for man and beast is largely dependent upon the sun. The coal and petroleum deposits are the stored up sun-energy of a past period. The sun's rays lift into the upper atmosphere enormous quantities of water which later are released as rain or snow on hill and mountain peak. This water inevitably flows again toward the sea, and in so doing furnishes the energy to operate countless water wheels. But even though the sun's rays are the fundamental sources of all the energy we use, we are at present able to utilize them only to a limited extent. We move closer, however, as time passes, to a more direct and efficient use.

In some parts of the world men and animals still work pumps and grind grain—in general, supply the simple needs there are for power in such places. Animals (more especially horses), however, yet furnish the major supply of power necessary to pull the plows and other implements on the farms of even so advanced a country as America. They also furnish the greater part of our hauling power. In spite of the spectacular rise of automotive transportation, the horse hauls most of the farmer's produce to market and brings his supplies back to the farm. Nor has the horse been entirely replaced by the motor truck for city hauling.

Fuel supplies approximately three times as much power as does water. Of the several fuels now in use coal is the most important. However, petroleum is assuming a place of increasing importance, especially if we include the power produced by the small units such as are used in automobiles, trucks, and motor boats.

Scientists and engineers have of late been giving much thought and time to considerations of the extent of our known power reserves. The United States Geological Survey estimates [1] the developed water power of the world (Jan. 1, 1928) at 34,000,000 horse power; and the potential (available at ordinary low water) at 459,000,000 horse power. The distribution of this power by continents is shown by the following chart:

The World Power Conference which was held in London during the summer of 1924 estimated the total world coal reserves as over 7,000 billion metric tons (a metric ton being approximately equal to the short ton of this country). This is over 7,000 times the estimated world production of coal in 1923. At the present rate of use this will be enough for some 4,000 years.[2]



(1) Africa 14,000 horsepower
(2) Oceania 240,000 "

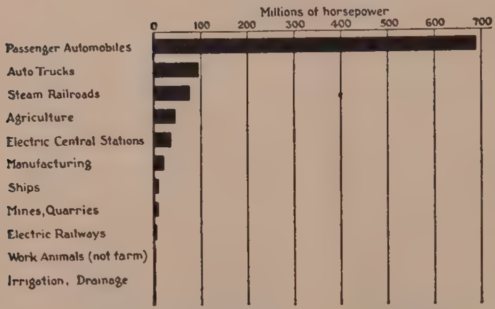
The water power of the world. The total "developed" and "estimated potential" power is shown by the lengths of bars. That part which is *developed* is shown in black; that which is *potential* is shown in cross-hatch. (Based on U. S. Geological Survey Estimates.)

[1] *The World Almanac*, 1929, p. 343.

[2] According to the calculations of Mr. D. B. Rushmore, chief engineer, power and mining department of the General Electric Company, if our coal consumption were to continue to increase at apparently the normal rate of seven per cent each year, the life of our known reserve would be as follows:

Eastern District, which includes the most accessible and best quality of our fuel	59 years.
Eastern, Central, and Southern Districts	65 years.
Entire U. S. and Alaska, two-thirds of this being low-grade coals and lignites	84 years.

But there is some reason for thinking that our use of coal may increase very little if any further. Statistics for the past 15 years seem to show an annual consumption which reached a peak in 1918 and has fallen off since, irregularly but persistently, for both bitu-



The tremendous development of mechanical power since the beginning of the century, and particularly since 1909, has been in the transportation field. Figures showing the primary horse power installed in different activities in 1909 and in 1927, according to the conference board, are:

Primary Horse Power in U. S. Industry	1909	1927
Manufacture	16,803,000	20,140,000
Mines, quarries	4,403,000	7,530,000
Agriculture	30,807,000	45,960,000
Irrigation, drainage	361,000	1,300,000
Electric central stations	5,225,000	35,623,000
Electric railroads	3,091,000	3,780,000
Steam railroads	45,400,000	76,420,000
Ships	3,122,000	9,300,000
Passenger autos	7,458,000	688,540,000
Auto trucks	256,000	96,160,000
Work animals, not farm	3,405,000	1,500,000
Total	120,331,000	986,253,000

The table shows that from 1909 to 1927 the primary horse power installed in manufacture increased only 20 per cent and that it has remained practically stationary since 1919, the increase in power used by factories since those dates coming largely from purchased electrical energy. Including purchased power, the country's factories in 1927 used about 100 per cent more power than in 1909 and probably 28 per cent more than in 1919. (Data from a study by the National Industrial Conference Board.)

There has been some effort made to utilize the energy of sunlight and the energy of the tides for supplying power for industrial purposes. However, they have advanced only to an experimental stage and have not yet proved themselves able to compete in the commercial field with steam, gas, or water power, but as potential sources of power we may well consider for a moment their possibilities. The data of Ericsson and Buchanan on the energy of the sun are significant. Ericsson in 1870 estimated the direct heat energy of the sun in 45 degrees latitude to be equivalent to about 13,000,000 horse power for a square mile. Buchanan in his work in Egypt in 1882 made estimates which would give 214,000,000 horse power per square mile.[3] Some schemes have been tried for utilizing the sun's rays as a source of energy. It needs but little imagination to realize the possibilities of such mechanisms in northern Africa or our own arid Southwest, where the sun shines perpetually. Further development will be dependent upon the increasing expense of other power sources as well as upon the perfection of cheaper mechanisms for transmutation into power.

The utilization of the tides as a source of energy has long interested man

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minous and anthracite. Perhaps we shall never use all the coal reserves. Other and cheaper or better sources of power may be substituted.

[3] These figures become more significant when we realize that over 29½ million primary H. P. were utilized in American industrial plants during 1919. Using the estimate of Ericsson, 13,000,000 H. P. per square mile, we find it to be almost double the capacity of existing water wheels in the U. S. for 1921.

in his search for a means of supplementing his own effort. The most successful tide power plants take advantage of the rising tide to store water in tanks or basins from which it is allowed to fall again upon water wheels or turbines. The following is a description of the tide plant of the Rockland Power Company at Rockland, Maine.[4]

"The plant consists of two basins, a high-water and a low-water one. Each basin has an area of one square mile and there is a tide of ten feet. From the high-water basin a 15-foot shaft extends vertically downward for 203 feet and then is connected by a horizontal tunnel to a 35-foot shaft extending upward to the low-water tank. At the top of the down-flow shaft there are 1,500 half-inch air tubes, through which air is drawn into the water and carried to the bottom of the shaft. The air separates at the bottom and accumulates in an air chamber while the water flows up the larger shaft to the low-water tank. The air is under a head of water of 195 feet and is piped through a 14-inch pipe which joins a 30-inch main. This apparatus develops 5,000 H. P. and has an efficiency of 75%." There is also a plant being installed at the mouth of the Severn River in England. The plan there is to utilize the 30-foot rise and fall in the daily tide by the building of a dam across the estuary of the river. Power will be generated by means of turbines set into the framework of the dam. It is estimated that enough power can be developed during a ten-hour day to run most of the mills of the manufacturing centers in this vicinity.

Another possible source of fuel for power is oil from oil-bearing shale. This extraction may prove feasible when the supply of petroleum from wells has materially diminished and prices have consequently stimulated the exploitation of new resources. Petroleum is, even at present, being extracted from shales in Scotland on a commercial scale; and there are enormous areas of these shales in the United States which may some day be drawn upon.

Also there is, of course, the possibility of utilizing to a greater extent the energy of moving air currents. The wind is one of the oldest sources of power; yet there has never been any very extensive utilization of it. Windmills have, for several centuries, pumped water, ground grain, and performed other minor operations. Improved types of air motors for utilizing wind energy in producing electric current have been developed quite recently. But whether we shall in the near future be obtaining much of our power from the "overhead power house" is a problem yet in the speculative stage.

J. B. S. Haldane sets forth some interesting speculations regarding future power sources in his interesting little book *Dædalus*, to which we have referred before. One of his suggestions is that windmills may be used to work motors which supply current for the electrolytic decomposition of water into oxygen and hydrogen. These gases, it is suggested, may be liquefied and stored in vacuum-jacketed reservoirs. In times of calm the stored gases would be utilized for driving internal combustion engines, which, in turn, would supply electrical energy.

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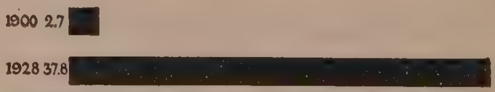
[4] Fernald, Robt. H., and Orrok, George A., *Engineering of Power Plants* (N. Y., 1921).

Old Faithful Geyser, Yellowstone National Park. An external evidence of extreme heat below the surface of the earth—and immense unused sources of power! (Photo Ewing Galloway.)

From external evidences such as volcanoes, geysers, and hot springs, it can quite definitely be assumed that below the earth's crust are regions of extreme heat. The higher temperatures in the deep shafts of the Utah and Montana copper mines are further evidence that such conditions of heat exist. Here should be a great source of energy if some practical method of transforming into usable power can be worked out. It would probably have to be in the nature of a deep bore, where water forced down would be sent back as steam [5] to be utilized in steam turbines and transformed into electricity. In California an interesting project utilizing the heat of the earth is already well developed. The particular region is one of numerous small geysers emitting mostly steam. Engineers have put down several borings, obtaining steam under sufficient pressure to run engines. There are many plans like this over the country; natural power houses may develop from some of them. However, like oil shale, tide, and solar power, this resource will have to await the time when the more available resources are depleted before extensive developments will take place.



Production of petroleum in billions of gallons. Oil is an important source of power as well as almost our only dependence for preventing friction among the multitudes of moving parts in our machines. (Based on Census Bureau Data.)

The work of physicists and chemists, during the last decade in particular, has opened new possibilities of power. Much speculation has followed upon the discovery of radium by the Curies. The physicist and the chemist now find themselves faced with countless new problems growing out of discoveries concerning the atom and its structure. Some of the scientists profess to see limitless stores of energy locked up within the small compass of the atom. Whether this atomic energy can ever be released in sufficient quantities to supply man's need for power is a highly speculative question—one upon which scientists are still unable to agree.

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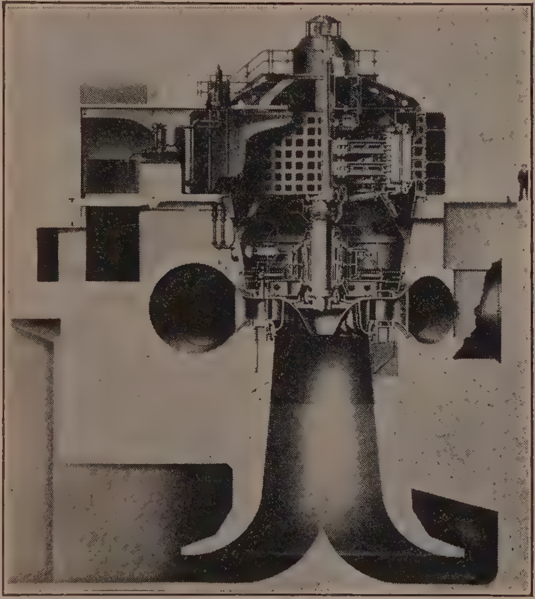
[5] This is, of course, what happens in a geyser.

During some early period of the earth's history, long before man began to remember and record, the energy of the sun was being transformed by minute vegetable cells into vast jungles of trees and plants. Then came geographical revolutions when these dense forests were submerged and subjected to pressure and heat of varying degrees. And as a result of all this we are now able to extract from the earth coal and petroleum. If we could but learn the secret of this vegetable cell which takes from the air the carbon necessary to build its structure, utilizing the sun's rays in some mysterious way as an aid, then we could, perhaps, feel ourselves far advanced toward a solution of our power problem. It would not be solved, however, until we had found a means of intensifying and accelerating this process of storing energy.

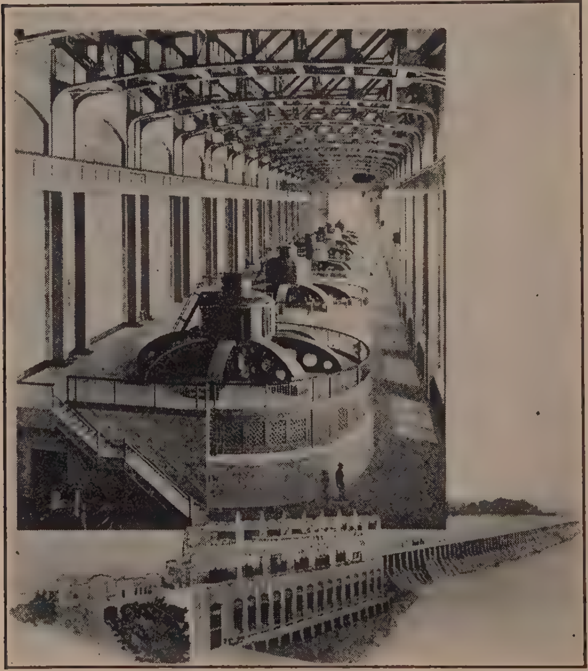

An "inside" view of a huge hydroelectric unit built by the Allis-Chalmers Company for the Niagara Falls Power Company. It has a rating of 70,000 H. P. Note man in upper right of picture. (Courtesy Allis-Chalmers Mfg. Co.)

3. *Mechanisms for the Application of Power*

All the possible power resources in the world would be of relatively little avail without mechanisms to transform this energy into useful work. Water tumbled and hurried down from the hills and from the mountain peaks long before man devised the water wheel and harnessed it to his mill. But when the search began for power to apply to the new tools, natural forces were never a limiting factor.

How man has utilized raw materials, motive power of varying forms, and tools and machines to increase the quantity and variety of products and so better the quality of his life would make a story far too extensive to be covered in a single chapter. We can only touch on a few of the more outstanding mechanisms and processes by which man has supplemented his own energy.

Of primary importance in such a consideration are those mechanisms which are directly responsible for the transformation of energy into work. These mechanisms we call motors. In a general sense these would have to include men, horses, and other animals since they are capable of transforming food energy into work. We will here, however, limit ourselves to the consideration of such mechanical motors as heat engines including steam, gas, oil, hot-air, and solar engines; pressure engines such as water wheels and water motors; windmills; and electric motors.



The Conowingo Hydroelectric Development at Conowingo, Maryland. Designed and built for the Philadelphia Electric Company by Stone & Webster. (Courtesy Stone & Webster Incorporated.)

The oldest of these mechanisms in point of use, the water wheel and the windmill, have undergone relatively little change in principle. This is more especially true of the windmill. Instead of wood, metal is now the construction material of both water wheels and windmills. The development of the water turbine was, of course, a distinct advance. Some of the turbines such as those at Niagara Falls and Keokuk are capable of developing as much as 70,000 horse power.[6] The turbines just mentioned are dependent upon large "heads" of water and operate at a low speed. There are many turbine plants, especially along the Pacific Coast which are able to operate on small heads of water; but this is only possible where there is a higher fall and consequently a greater pressure. The turbine has a relatively high efficiency,—that is, it is capable of transforming a relatively large amount of the energy imparted to it into useful work. Some turbines are capable of delivering as much as ninety per cent of the original energy.

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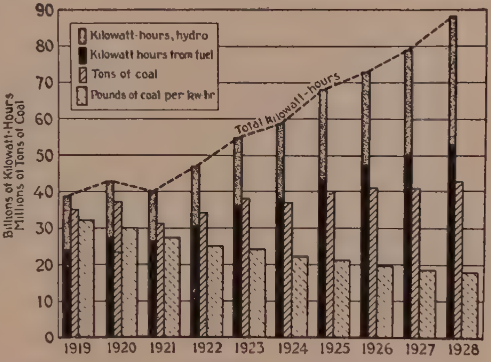
[6] Work is already far advanced on the installation of the Soviet Government power plant on the Dnieper River, each of whose turbines will develop 80,000 horsepower.

Most of our power at present is developed by fuel power motors utilizing coal, petroleum, and gas. Motors for this purpose are of two general types: those deriving their power from motion imparted to a piston and those which depend upon turning the blades of a wheel. In the first class are the steam engine and the internal combustion engine; and in the latter the steam turbine.

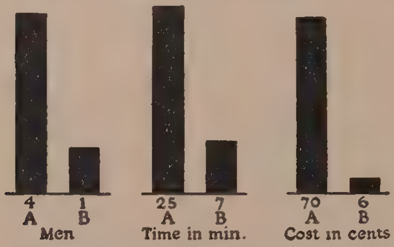
Relatively little more change has taken place in the development of the piston engine since the time of Papin in 1690, Newcomen in 1705, and Watt in 1763, than has taken place in the development of mechanisms for utilizing wind and water. The improvements in the use of steam as a motive force have been primarily an effort to increase the efficiency of the piston engine itself. The outstanding exception to this is the invention of the steam turbine. The steam engine is known for its lack of efficiency in obtaining the largest amount of power from a given amount of fuel. Relatively few plants at present are capable of obtaining more than twenty per cent of the potential energy from coal. A host of devices and schemes have been developed to overcome this weakness of the piston engine, such as improved types of boilers, water heaters, superheaters for steam, and automatic stokers. The automatic stoker is of double importance, first in saving the labor of men, and second in better utilizing the coal. It is worth noting here that the more efficient steam plants are those developing large amounts of power, probably over 100 H. P. It is in these large units that steam power surpasses gas power as a source of energy. The steam-turbine type of engine was conceived long before it finally came into use. For large power units it is now replacing many of the older piston types of engine.



Consistently, even rapidly, the ratio of power produced to coal used in its production is increasing. Efficiency has nearly doubled in the last decade. In such ways mankind raises itself by its bootstraps. (Adapted from *The Electrical World*, January, 1929.)

Engines using gas, oil, or gasoline are usually spoken of as internal-combustion engines. The fuel, which must be in gaseous form as it enters the engine cylinder, is mixed with air in the proper proportions to form an explosive mixture. It is then compressed and ignited within the cylinder of the engine. The pressure resulting from the explosion again forces the movable piston into motion, thus transforming the energy of the fuel into work.

The internal-combustion engine has had an important part to play in the present industrial development. The tremendous growth of the automobile industry is in large part due to its invention and refinement. The advantage of the internal-combustion engine over the steam power plant is primarily that of its availability in smaller units. In places where the needed power can be supplied with a small power unit of less than 100 H. P. the gas engine offers the best type of motor. The fuel sources are manifold and in many instances are waste products, such as blast-furnace gas, which, if it could be utilized in the production of steel, would eliminate the use of a considerable percentage of the coal now used. Being relatively smaller in size per given H. P. makes the gas engine advantageous for use in places where space is at a premium.



A comparison in number of men, time and money required, to handle five tons of ashes. A, by hand-shoveling; B, with use of portable conveyors. (Statistics from *Industry Illustrated*, N. Y.)

The Diesel engine is a particular illustration of this fact, as is shown in the following table.

COMPARISON OF DIESEL AND STEAM ENGINES[7]

	DIESEL	STEAM
H. P.	21,000	21,000
Weight of engine and accessories	1,000 T.	3,400 T.
Space required	5,300 cu. m.	10,000 cu. m.
Daily consumption	100 T.	360 T.
Consumption for voyage of 15 days	1,500 T.*	5,400 T.
Bunker space for voyage of 15 days	1,700 cu. m.	7,000 cu. m.
Total space required for engine and fuel	7,000 cu. m.	17,000 cu. m.

* Heavy oil.

The Diesel engine is being manufactured in commercially available types which develop as much as 500 B. H. P. per cylinder and some double-action types are even able to develop 1,000 H. P. per cylinder.

The importance of mechanisms for transforming fuel into power might be better appreciated if we consider their great advantage over man as a source of power. The following excerpt is a striking illustration:

"One of the serious objections to the use of man-energy for motive purposes lies in the impracticability of securing large amounts of power from even large groups of men. A little calculation will make this point clear: The power plant of a modern department store may contain, let us say, eight steam boilers with an aggregate capacity of some 4,000 H. P. To produce 5,000 H. P. by the use of men it would be necessary to employ 5,000 x 10 or 50,000 men who are supposed to drive the electric generators treadwheel fashion. Assigning a floor space of 2 ft. x 4 ft. to each man, these workers would require a total floor space of 50,000 x 8 or 400,000 sq. ft., which is about one-fifth of the total floor space in the Philadelphia store of John Wanamaker."[8]

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[7] De la Tramerye, *The World Struggle for Oil*, p. 15.

Turbines developing 40,000 H. P. are not uncommon today. There is one at the Waterside Station of the New York Edison Company of this capacity. It is fifty-seven feet long, twenty feet wide, fourteen feet high, and weighs 975,000 pounds. It would take 400,000 workmen to develop this amount of power, calculating that one man can produce one-tenth of a horse power.

Modern unloading equipment installed at the River Rouge plant of the Ford Motor Company is capable of unloading 600 tons of material per hour. The average lake boat is rated at from 10,000 to 12,000 tons; so it can be seen that by working continuously a boat could be unloaded each day.

An ore boat being unloaded at the River Rouge plant of the Ford Motor Company.

In the early part of the nineteenth century a woman was able to spin twelve skeins of thread in ten hours; this would produce a thread somewhat more than ten miles in length. In the modern factory she can attend 600 to 800 spindles, each of which spins 5,000 yards per day. If she happens to be tending 800 spindles this would be 4,000,000 yards or about 21,000 miles of thread per day. The saving effected here by power and machinery over hand processes is stupendous.

To attempt to classify work in the present industrial sense into all of its categories would be quite beyond the scope of the present discussion. But, in general, man's labor consists of lifting, pushing, pulling, or striking things. To this might be added many processes such as weaving, spinning, cutting, and forging. In industry at the present time, moving goods might mean a multitude of operations, from the handling of the various raw materials to the handling of the finished product. The development of mechanisms to supplement man's labor in this task is very interesting. A glance through the advertising sections of such journals as *Industrial Management* or *The Engineering News* is an interesting index of the importance of mechanisms for this purpose. These include cranes of various sorts, carriers and elevators for handling all types of raw and finished materials, pneumatic devices for handling the same materials, and pumps and piping systems for handling liquids. If each large industry had been dependent upon man-labor for lifting and transporting the various products in the course of manufacturing, the present stage of development certainly never could have been reached.

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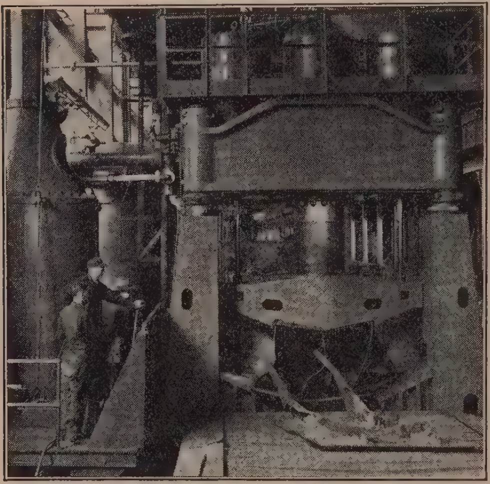
[8] Greenfield, "Human Energy as a Motive Power," *Cassiers' Magazine*, 1911.



The ships Mr. Ford bought from the government as junk just after the war were reduced to manageable scrap by such great shears as these. Man's part in these processes—aside from planning and building the machines together with applying power to them—has been reduced to the effort involved in moving simple levers. (Courtesy Ford Motor Company.)

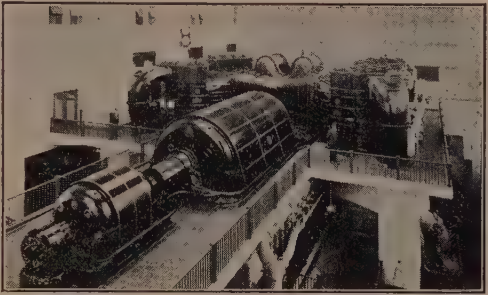
In the field of cutting, drilling, and boring the advancement has been no less marked than in the field just considered. Saws set with diamond chips, or made of special steel alloys, are used in quarries and have eliminated slow, tedious hand processes.

In steel plants, steel bars and plates are cut or sheared with as little effort as we use to cut cardboard. Power drills are used in constructing the small precision instruments for the laboratory or in boring the parts of the huge machines now used in mills and mines. Trip hammers are constructed with the control so accurate that they can strike blows of several hundred pounds or ones so regulated that they would not break an egg placed on the anvil.

The processes of manufacture which a large proportion of the articles of everyday use pass through, have become so involved that it would require a separate book to describe them in detail. The processing of cotton, for example, involves first of all the ginning which separates the seed from the fiber. After the cotton reaches the factory it passes through a complex system of cleaning and carding. The fiber is then ready for spinning. Before the spinning process can start, the fiber must be straightened out and reduced to a continuous strand. After the thread is spun, there comes the process of weaving, dyeing, and finishing before the finished cloth is ready for the store counter. The process is, however, nowhere so simple as is indicated in this short discussion. The introduction of labor-saving machines has played an important part in making cotton manufacturing as important as it is.[9] The shoes we wear, the watches we carry, and the books we read are all products of complex mechanized industries.

4. *Electricity*

The importance of electricity in the present industrial system as a supplement to human power is worthy of special mention. It offers a convenient method for transmitting power over long distances. This makes possible the utilization of water power at some distance from its actual source. Further, it makes possible the placing of this power where the need for it is greatest—usually near sources of other raw materials. It is also a type of power which can be handled easily and divided into small units. This supplies the needs of many types of manufacturing where many small power units are required rather than one large unit. By using electricity, power can be supplied to small individual motors directly attached to the machine rather than by complicated transmission systems.



The inventors of the first wheels or even the discoverers of electric power would be lost in wonder at some of the modern developments built upon the foundations they prepared. This is a 94,000 kilowatt Tandem—Compound Turbine Generator operating at Long Beach in California. (Courtesy General Electric Company.)

Electricity may be the product of any of the several sources of power already mentioned. These, coupled to a dynamo, produce the current, which may be carried over wires to the places where it is to be used. In the past electric plants have all been more or less isolated and constructed with no relation to any other than the section immediately about them. There is, however, a growing interest in schemes for the integration of the electric power systems of this country into what are frequently spoken of as "super-power systems." President Hoover has described "super-power" as "interconnections and the relay of excess current with the full development of water power." Another scheme for unifying the electric power plants of the country has been advocated recently, which is usually called "giant power." It is said by the advocates of giant power that super-power is too limited in its scope to include all the possible relationships which cheap and widely distributed power may have to advancing civilization. They have called their system "giant power" to distinguish its social significance from the mere business connotation of the term "super-power." However, it is not our purpose to discuss the merits of these systems, but to mention them here as steps forward in bettering the power situation in this country. Super-power gained in importance during the war when there was need for the best use of all power resources. It consisted, for example, in interconnecting the central power plants of Pennsylvania so that the excess power of one plant could be sent into the adjoining district in case of need there. The recent super-power survey conducted by the United States Geological Survey covers quite fully the possibilities of super-power along the Atlantic Coast from Boston south to Washington, D. C. Recently the power companies of the industrial areas of the Southeast have been endeavoring to install a super-power system there. The giant-power scheme could perhaps be best set forth by quoting the following seven tentative objectives as set forth by Morris L. Cooke, Director of the Giant Power Survey of Pennsylvania:

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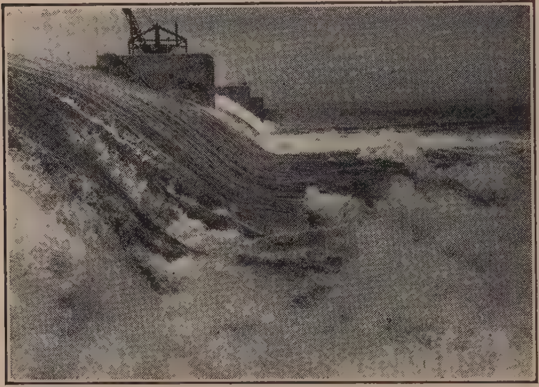
[9] In 1805 the census figures show that there were 4,500 spindles in the country; by 1831 the number of spindles had increased to 1,200,000, using 77,800,000 pounds of cotton. There were in 1928 more than 36,000,000 active spindles in the United States.



Spillway of the new government dam at Louisville. The power plant is just visible in the distance. We are rapidly increasing the efficiency with which we convert the energy of falling water into motive power for industry. (Courtesy Louisville Industrial Foundation.)

> 1. Large stations of not less than 650,000 H. P., stations of the size recently announced by the Philadelphia Electric Company and by the Commonwealth Edison Company of Chicago.
> 2. These stations shall be at or near the mines when power is developed from coal.
> 3. Current shall be fed into a trunk-line transmission system reaching 220,000 volts, a line capacity such as they have in California but of which there are none in the eastern part of the country.[10]
> 4. By-product recovery shall be practiced. In Pennsylvania we are burning 44,000,000 tons of coal a year for power purposes alone, and so far as we know, none of that coal is processed for the recovery of by-products.
> 5. Integration of companies so as to develop an integrated system, though not necessarily one single company.
> 6. Railroad electrification.
> 7. Power to the small user (particularly the farmer).

[10] One has since been announced, according to newspapers, by the Pennsylvania Power and Light Company to run eastward out of Sunbury, Pennsylvania.

The giant power plan might be likened to our plans of national highways extending as main thoroughfares across the continent. The advocates of giant power eventually would extend major power lines across the continent. This, however, would follow the need for power. For the present, their plan would cover the industrial areas of the East; power would be generated in the coal fields of Pennsylvania and supplemented by available water power. As the traffic from the less used roads is contributed to the traffic along our main highway, so would each generating plant along the major line contribute to the total available power. Those who needed the power would receive it transformed into a current of proper voltage.

The utilization of coal at the mines for the manufacture of electric current would effect a great saving in the by-products which are contained in the coal, but for financial reasons and because of the inertia of custom, it will probably be some time before we get a scheme such as the giant power plan.[11]

Steel towers supporting high-tension lines for the transmission of electrical energy. (Photo Hine.)

One of the important considerations in the use of electricity as a source of power is the problem of transmission. The art of long-distance transmission had its start about thirty years ago; then a line eighteen miles long operating at 11,000 volts was a distinct advance. Today along the Pacific Coast there is a network of lines 1,200 miles long operating at 165,000 volts. Wireless transmission of power also may be only a dream for the distant future but it begins to assume practical aspects. Laboratory experiments recently carried out show it to be possible, at least over short distances. When we realize the short period of time which has elapsed since wireless telephony first made its appearance, we should be rather hesitant about doubting the possibilities of eventual wireless transmission of power.

✓ Electricity has become a servant of many other uses than those of turning the wheels of our factories, propelling ships over stormy seas, or pulling long trains over mountain passes. It lights our homes and streets, furnishes

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[11] Plans are under way in Germany for the conversion of coal at the mine into gas. This gas is to be piped to the industrial centers where it can be used for industrial purposes. If the by-product process of producing gas is used, the many valuable by-products will be saved, and the industrial centers will be provided with a much more efficient and cleaner type of fuel. This method of coal utilization is not technically impossible even where gas must be piped for long distances. Denver is now using natural gas piped from Texas wells.

MONDAY 8:00 A.M.

After a trip of approximately 45 hours from Marquette the ore boat docks at the Fordson plant. Hulett unloaders start removing the cargo which is transferred to the High Line and from there to the skip car which charges the blast furnaces. By continuous process this takes ten minutes.

TUESDAY 12:10 A.M.

In sixteen hours the ore has been reduced to foundry iron, which is carried in a molten state to the foundry. In less than an hour it has been mixed with the proper proportion of scrap and poured into molds.

TUESDAY 1:10 A.M.

As the conveyor brings the molds past the pouring station the hot metal is cast into cylinder blocks. These go to the shake out station and are taken away to be cooled and cleaned. The cooling and cleaning process requires an average time of five hours.

TUESDAY 6:10 A.M.

The casting now goes to its first machining operation. It takes two hours and forty minutes to machine the casting. This machining is performed in the foundry building in line with the Ford practice of continuous operation. It arrives at the motor room at 9:25 A.M., Tuesday.

PRODUCTION CYCLE

TUESDAY 9:25 A.M.

It requires two hours to assemble and block test the Model A engine. Except for "running in" to loosen it up, everything is done on the move until it reaches the testing block.

TUESDAY 11:25 A.M.

The finished and inspected motor comes out on a conveyor and is loaded into a freight car and shipped to an assembly plant. It takes about ten minutes to convey and load in the car.

WEDNESDAY 6:35 A.M.

By this time the motor should have reached an assembly point 300 miles distant. It takes approximately thirty-five minutes to unload the car and carry the motor to the assembly line.

WEDNESDAY 7:35 A.M.

It takes one hour to assemble the complete car, so by 7:35 A.M. the car is ready for the dealer.

Long before noon the dealer will have taken delivery of the car and paid cash for it. Here is a conversion of raw materials into cash in approximately fifty hours. Of this fifty hours, twenty-four are consumed in shipping and handling. Even this record-breaking cycle is often shortened. (Courtesy Ford Motor Company.)

heat and light for industrial plants, provides motive power for rapid transit, and permits long-distance communication. Until comparatively recent times little electric current has been used for supplying heat. There is an increased use of it, however, in industrial plants for all manner of operations from baking bread and melting glue to the enameling of automobile bodies. The initial cost is still high, but its economy and convenience tend to offset that. Experts of the Westinghouse Electric and Manufacturing Company consider it to be only a matter of time until the heating of houses by electricity will become practicable.

Electric lighting has come to have enhanced importance in industrial processes as lighting engineering has progressed. Better lighting in a plant definitely assures more efficient operation: and lighting engineers are keeping abreast of progress in other branches of the electrical industry and are producing many interesting innovations.

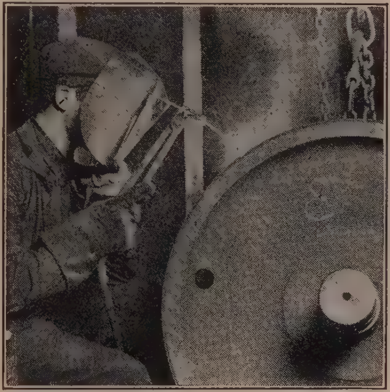
There is hardly any section of the industrial system which has not been materially affected by the application of electricity to some of its processes—power, heat, transportation, light, and control. And it is most interesting to note that many of these developments are more or less in their infancy; so that perhaps we may see startling progress in the coming decade.

5. *Special Outstanding Processes*

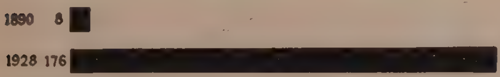
Out of the multitude of contributions which the sciences of chemistry and physics have contributed to the advancement of the industrial arts, there are a few which warrant our special consideration. The development of special steels and alloys, from which high-speed tools have been made, paved the way for a tremendous development of the art of steel-making and the use of the lathe. Steel alloys of vanadium, nickel, tungsten, and chromium, as well as other elements, produced valuable materials for the construction of articles needed in the production of ball and roller bearings, axles, and the countless other industrial mechanisms requiring toughness, ability to withstand vibration, hardness, etc. The use of the electric arc and the combination of hydrogen and acetylene for cutting and welding has been of immeasurable importance. The welding of unlike materials presented to the blacksmith an almost insurmountable problem which has been overcome by the new uses of the intense heat of the electric arc and the oxyhydrogen flame. No steel girder or steel plate can withstand the man equipped with an oxyacetylene blowtorch.

Processes for producing extreme cold are just coming into increased commercial use. These processes as means of maintaining low temperatures in storehouses to preserve foodstuffs, furs, and other materials, are more or less familiar to all of us. These processes are finding many other uses, however, such as the separation of gases. Oxygen for use in the acetylene blowtorches, nitrogen for use in light bulbs, and the like are produced in this way.

As means of destruction, explosives have had a comparatively long career; but it is only in more recent times that we have begun to use explosives for the advancement of the industrial arts. Coal is shattered from the vein, drainage canals are excavated in the Everglades of Florida, and mountainsides are blown off for the building of railroads, by the use of this new source of power. The handbooks of the explosive manufacturing concerns are interesting compendiums of the possible uses of this new ally of man.


Welding with the electric arc. (Photo Hine.)

For many centuries man has constructed his homes and public buildings of rock, but only by the spending of enormous amounts of time to cut and transport it over great distances. No one knows the number of lives destroyed in the construction of the Pyramids. As we contemplate some of the marvelous old-world structures it seems impossible to us that they could have been built with the human being as the primary source of power. We are still using rock from its various sources for our homes and public buildings, primarily because of the beauty which this material adds to the structure but also because of certain definite other characteristics. But we no longer use human powers wastefully as did the ancients. A new factor in the art of construction entered with the invention of concrete. Concrete no less than steel has revolutionized our whole conception of building construction. It is a material which lends itself to varied shapes and forms. It can be semiliquefied, thereby making possible forms which would involve enormous expense and effort if stone from the quarry had to be cut and fitted. It has also given us a substitute for stone which is capable of supplying the needs of sections of the country quite devoid of any form of building stone. It has a multitude of uses, from foundations to floors and sidewalks; and from roofs to framework, girders, and columns. As a material for the making of structures which will be exposed to water, it is not surpassed by any other building material. The use of concrete was one of the most important factors in making possible the construction of the Panama Canal. It very generally supplants stone as a building material, and because it is fireproof and waterproof it is far superior to lumber for most purposes. Its low tensile strength can be rectified by the use of steel beams and wire embedded in the concrete for reënforcing. An interesting use of



Production of cement in U. S. in millions of barrels. (Based on Census Bureau Data.)

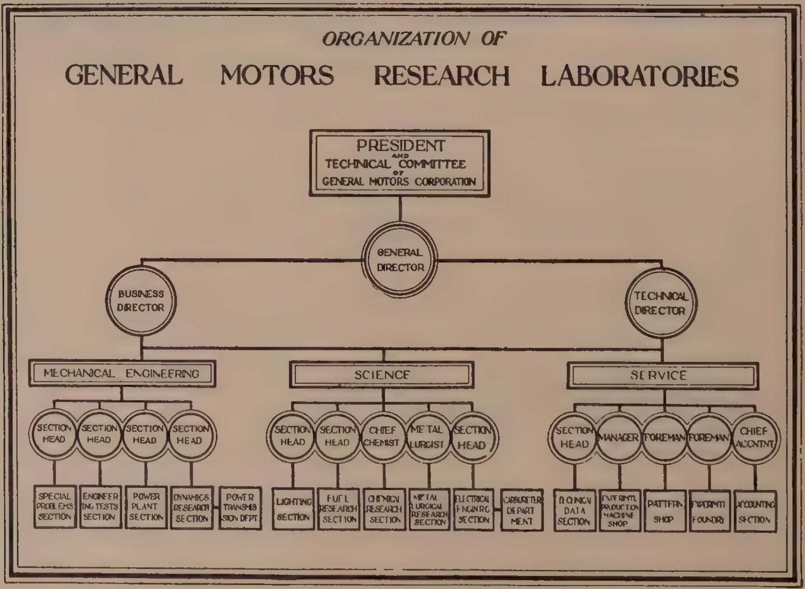
cement is in the form called gunnite. This is a liquid cement mixture which may be sprayed over wooden buildings as a protective cover. It may also be used as a spray in mines to cover rock surfaces and so eliminate to a large extent the crumbling and disintegration of the rock walls.

These few processes mentioned above by no means exhaust the field, but are merely examples of some of the more outstanding developments contributing to a new day in industry.[12]

6. *Industrial Research*

In the discussion at the first of this chapter we pointed out how, by more or less haphazard methods, the factors which had contributed so materially to our present civilization, were discovered.

At first it was primarily a matter of the combination and manipulation of these more or less fundamental elements. Later there developed a definite effort to classify the important principles which had grown out of this earlier experimentation. These classifications and generalizations later became known as science. After the Industrial Revolution the more important developments grew out of the application of the sciences of chemis-



(Courtesy of General Motors Research Corporation.)

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[12] The student wishing further reading along this line will find much in the current issues of the engineering journals, such as: *The Engineering News-Record* (New York), *The Industrial Engineer* (New York), *The Electrical World* (New York), *Concrete* (Detroit), *The Explosives Engineer* (Wilmington, Del.), *Industry Illustrated* (New York).

try, physics, thermodynamics, hydraulics, and mechanics. It is not at all probable that our major inventions could have been made without the aid of these sciences. In any attempt to push urban production to higher levels, we still continue to be largely dependent upon the application of their principles.

A member of the staff in a commercial research laboratory. (Photo Hine.)

Industry itself is fast recognizing the importance of scientific research. Industrial research consists primarily of a systematic search for the solutions of certain definite problems. The growth of radiotelegraphy and telephony is perhaps one of the best examples of what comes about when problems are attacked in this way.

(Courtesy of Olds Motor Company.)

Manufacturing concerns have not been slow to apply scientific knowledge and methods of analysis to their problems of production. In fact, most large concerns, such as the Eastman Kodak Company, the Western Electric Company, the sugar companies, and the United States Steel Corporation, maintain large and efficient research departments. They maintain on their research staffs some of the best chemists and physicists in the country. Their laboratories are supplied with all the latest and most efficient apparatus. In fact many of the recent great discoveries have come from commercial laboratories. An interesting example of this is the work of the General Electric staff in evolving a commercial process for the production of fused quartzite at a low cost. The evolution of the vacuum tube, which is at the basis of radio engineering was, similarly, a laboratory achievement.

It is interesting to note how even the smaller concerns are installing research laboratories wherever it is at all practicable, or are availing themselves of commercial laboratory facilities. The universities of the country present even a better opportunity for the small manufacturer who is unable to maintain a research department and staff to which to submit his problems. In many cases a manufacturing firm, or even an association of firms, establishes a research fund in some university. The proper authorities of the university usually select the individual or individuals who are to carry out this work. In most cases the firm or group receives the right to utilize for a given period of years any definite results which may accrue from this research. This has been especially fruitful in the food industries and also in industries such as the manufacturing of soap and pottery.

Our government maintains the most important and largest research projects in this country and perhaps in the world. The Department of Agriculture, for example, is constantly involved in the solution of agricultural problems which necessitate the coöperative effort of chemists, physicists, bacteriologists, and indeed men from all of the scientific fields. The Department's work ranges all the way from the study of the proper food for man and animal to the best methods for the extermination of such enemies to crops as the boll weevil and the corn borer. Practically all of the other Government departments also carry on certain definite types of research work. The importance of this research work to the citizens of this country and other countries is incalculable. The unique feature of it all is that the results, if they be definite, are freely made available to all.

The magnitude of the present accomplishments in the field of science and invention today is such as to overwhelm us and yet were we to see listed the problems which the research scientist is working out or thinking in terms of, we would be even more astounded. Some especially are of the utmost importance to this generation; others would, no doubt, seem to the layman very unimportant and far-fetched, but we must keep in mind that the great developments of one age to a large extent rest on the apparently unimportant discoveries of some past time.

CHAPTER 13

INCREASING URBAN PRODUCTION BY MORE EFFECTIVELY USING HUMAN ENERGY

1. *The Failure of Slave Driving*

Without too violently stretching the facts we may say that since the beginning of time men must have engaged in their various productive activities for two reasons: first because they were driven to work by necessity (or by a master if they were slaves), and second, because man is the kind of animal he is—naturally active and actually unhappy unless he has something to do. The economic organization of medievalism and even of the early years of the industrial era developed systems of slavery or serfdom in which men were literally driven to perform hateful activities by masters who profited hugely by their toil. But ultimately the very growth of the surpluses which were the product of the industrial system built up institutions in the community which were the enemies of slavery—such, for instance, as education. And the general effect of the world's growing prosperity was the raised standards of living which were so prominent a feature of the last half of the nineteenth century everywhere. And even though the rises in standards were not shared alike by

This we call "unskilled" work. It is of the heavy, mucking sort which we know well enough how to eliminate but never seem to succeed in getting rid of completely. (Photo Ewing Galloway, N. Y.)

all classes, the standards of all classes were somewhat raised. And a prosperous people will not long remain content with slavery or semi-slavery.

There were more reasons than one why slave driving failed utterly. Among the more important of them, however, we can see, was the fact that slaves became more successful in resisting their masters; in addition there were the effects of the growth of democracy and humanitarian ideals. Also it soon became apparent that slavery was hopelessly failing to secure efficient and willing human effort.

As people came to have more leisure and to have access to more generous quantities of goods, they became far more effective in organizing and in resisting the power of those who formerly had driven them to work. As a result of this whole movement toward the organization of the workers and resistance to compulsion there was a notable movement to so re-create industry that workers need not to be driven to their tasks, but might find in industrial activities an outlet for their natural propensities for constructive activity.

2. *Voluntary Productivity*

It is this natural tendency of human beings to be active which remains as a dependence for the motivating of productive activities when slave-driving finally fails and disappears. But it cannot be expected that this voluntary motive to industrial effort can be made to function effectively so long as there remain factories which resemble nothing so much as prisons, and gloomy ones at that, and in which the activities are of a nature so monotonous, so wearing, and on the whole so dismal and so degrading to the human mechanism that there exists a constant tendency toward more or less active revolt. So long as we have remaining in our industrial system institutions of this kind, there will continue to be no other way of securing human effort than driving men to their work; but as organization proceeds, and as the ideals of industrial civilization become

This coal miner is using a machine drill, an improvement on the hand pick. More brains and less brawn are required to operate it. We call him a semi-skilled worker. (Courtesy of Philadelphia & Reading Coal & Iron Company.)

more and more concrete and present themselves in clearer form to the minds of executives and workmen alike, the old type of industrial environment as well as the old type of slave-driving incentive to work, seem more and more clearly to be survivals of a barbaric past which cannot long continue in the civilized world.

We are coming gradually to the point where we can see that in order to survive, industry not only will have to make the most effective use of the natural resources upon which it depends and of the executive ability of its managers, but also will have to discover the most effective ways of inducing voluntary endeavor amongst the rank and file of its workers. And when we study industry from this point of view we come inevitably to see that industry, in order to function effectively, will have to have its institutions so devised that men will function through them without that constant conscious withholding of effort which has been perhaps the greatest enemy of industrial progress, threatening to subtract from the product of industry more than can be added by constant technical advance, rapid as that has been and still is.

And not only for technological reasons have we come to see that industry must be reorganized to take advantage of the creative elements of human nature instead of depending upon the driving power of fear, but also because there has been a growth of democratic and humanitarian idealism amongst all the peoples of the world. Long ago democracy won a decisive victory in the struggle with political autocracy.[1] The fundamental inconsistency of our well diffused political democracy with the tenaciously surviving hold of industrial autocracy is becoming clearer and clearer to the minds of men everywhere. The two cannot continue as institutions of the same community.

3. *The Conditions of Proper Human Functioning in Industry*

If we are willing to admit, then, that modern effort must be secured, for these reasons, by proceeding through the stimulation of voluntary rather than involuntary endeavor, we are in a position to examine the groundwork for the reorganization of industry which must take place to bring about this result.[2] When we examine these suggested fundamentals we find them usually to be something like the following:

1. That workers must find some satisfaction in their work.
2. That they must feel their reward to be the direct result of and in an understandable ratio to effort expended.
3. That they must feel themselves identified with the productive group

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[1] Some peoples of the world have in recent years gone back to dictatorships. Strong men frequently thrive in troubled times. But there has been no suggestion of this sort of thing in Great Britain or the United States. On the whole, also, France and Germany have held firm. In the western world democracy has still a clear balance of prestige.

[2] The proper placing of men in going industrial organizations is not discussed here, but later on under the heading of "Personnel Management."

of which they are a part by understanding it, by having emotional ties to it, and by sharing the responsibility for its control.

4. That they must feel secure in the tenure of their work as well as in the income from it.
5. That they must be given social approval for their productive efforts.
6. That their health must be safeguarded not only against occupational hazards but against premature exhaustion and old age.

A craftsman—constructing a stained glass window. (Photo Hine.)

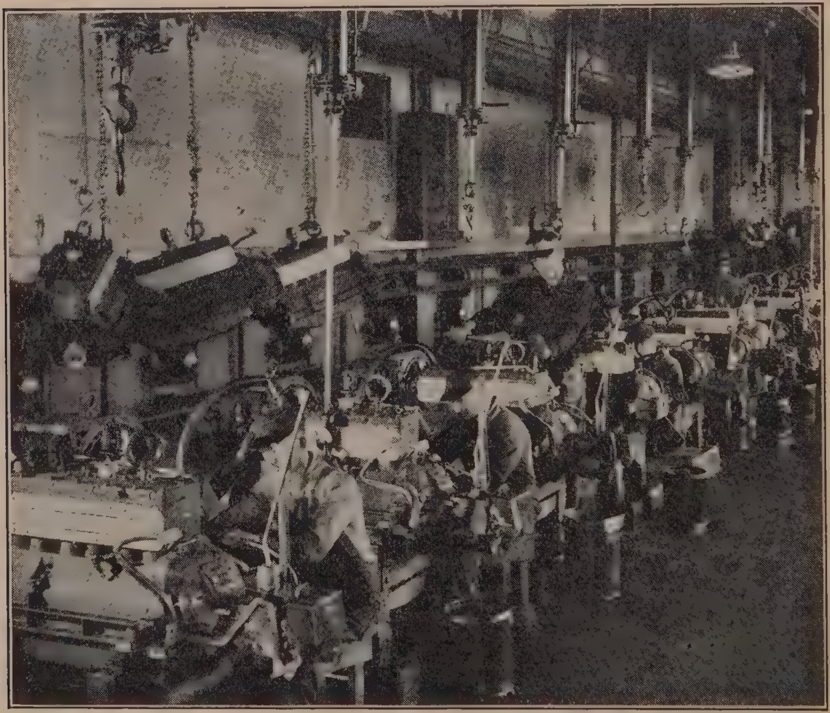
4. *Satisfaction in Work*

When we say that workers must find some satisfaction in their work we are perhaps stating the most elementary principle involved in this whole matter; and it must be clear that we do not mean the satisfaction there is in receiving pay. There must be a kind of joy in the very doing of the work itself, such feeling for the craftsmanship of the work as the medieval guildsman had. Indeed, this contrast between medieval craftsmen and modern workers brings out some of the conditions inherent in the very nature of modern industry that make it so difficult to see how it can be so reorganized as to bring the old enthusiasm back into it. The medieval craftsman made the whole of a thing himself. If it were a pair of shoes or a suit of armor, the work which was done was all his own. Whatever praise there might be for good workmanship came to him; and the result of a lifetime of continuous effort in the making of shoes or the making of armor was the reputation in the community of a good shoemaker or a good armorer. This reputation was a very precious possession.

There are a number of reasons why this kind of satisfaction, which may be supposed to have been the chief one in the life of the medieval worker, cannot possibly be had by the modern workman. In the first place, he does not make the whole of anything. So that when a completed ship sails down the harbor, or when a pair of shoes finds its way into the hands of the consumer, the people who use the ship or who wear the shoes cannot attribute their good qualities to any one worker. They can neither curse him nor bless him. The old individual pride of product has disappeared, and it is not possible that the community in general or even his family, whom the worker holds most dear and whose opinion he values most highly, shall give him any great credit for his productive efforts. On the contrary, his family and his neighbors probably know very little about his work as a producer. These are difficulties which must be faced. But, it has been suggested, it may be possible to substitute for individual pride in product a kind of collective pride which makes a man say: "That ship I helped to make—along with a good many other people, perhaps; but my work was as important as any one else's in it." So possibly a genuine *esprit de corps* may be engendered amongst a group of workers if other conditions happen to be favorable.

The new and the old. The larger picture shows a boiler room in one of the Ford plants equipped with latest stoking devices. Relics of bygone days, as far as this plant is concerned, are shown at the lower right of the picture. (Courtesy Ford Motor Co.)

It might be possible, and of course would be highly desirable, if somehow praise could be awarded to workers for their productive efforts as it once was. This is, of course, extremely difficult, since the home has become separated so completely from the place of work and since husband and wife are no longer partners in the productive enterprise. But it may still be possible, by some device, to reward men and to praise them for their productive efforts. What is perhaps more possible still is that the modern place of work may become the kind of place where a worker would rather spend the hours of his normally active day than to spend them in any other place; and that the kind of activities carried on there may be made the kind of activities in which he would rather engage than any others he could think of. Indeed, the very best type of modern factory is becoming just that sort of place, not a prison into which men have to be driven in the morning and from which they escape at night as rapidly as possible; but a genuine place for creative activity to which they go eagerly and which they leave reluctantly. This is the feeling of the chemist for his laboratory; of the writer for his study; of the physician for his hospital.



(Courtesy Olds Motor Company.)

It would not, of course, be truthful to say that there are many such industrial establishments as yet in the world, nor, considering the history of the industrial system, would it be likely that there would be many; but one who observes industrial life with understanding may see examples of just this kind of thing—obscure examples perhaps, but of the nature of those insignificant phenomena of the present which are the germinal beginnings of the future.

In a highly socialized industrial system, however, where the standard of living of the worker and of his family is dependent upon the money income received as a result of his productive efforts, it perhaps never will be enough simply to make the place of work a pleasant one in which to carry on the normal creative activities of life. There always will have to be furnished to the worker an income sufficient to maintain him and his family in comfort and so at peace with the world. Payment for work will, therefore, always have to be sufficient to maintain what we have in another chapter discussed as the comfort standard of life.

5. *Reward as a Direct Result of Effort*

But, if it is necessary to reward the effort of producers with a sufficiently high income for the maintenance of a certain standard of life, it also seems necessary to make certain that that reward is a direct result of and somehow bears an understandable relationship to the effort expended. It is hard to believe that it ever will suffice that a worker takes pride in the product of his work, that he has a certain creative joy in the doing of it, and that he has a certain confidence in the maintenance of the standard of life of his family. It, perhaps, also will be necessary that the reward he receives shall somehow be a greater one because of special effort or special intelligence on his part; and this is, on the whole, because we must see that, although unquestionably industrial society has overvalued the incentive-power of wages to persuade men to work, there were involved in the first idea of the payment of wages, conceptions of human nature which were sound.

These centered about the idea that there needs to be an inescapable connection between productivity and reward. It was a mistake, of course, to make wages the sole reward; and it was a still greater mistake to concentrate on wages as the agency of the fear-incentive which was then depended upon. For, by the time the industrial system had developed, men were not driven to work by whips; they were driven to work by the fear of want; the fear of starvation for their children; the fear of a pitilessly advancing old age. But these were fears nearly as vivid as the fear of a slave-driver's whip.

And so wage payment, which had in it the possibility of freedom and of the advantages of genuine reward for effort, was made the tool of the slave-driving employer. But it need not continue to be that if it is improved by a supplementary reward for productivity which will assist in bringing out its possible effectiveness. It must not be haphazard, however, and it must not be a flat rate. If it is either of these it misses the essential possibilities involved. If it is to be a genuine incentive to industrial endeavor it must come as a direct result of effort and must be in a direct ratio to that effort. Also, it must always be understood that between effort and the wage reward there will continue to be this relationship.

For hundreds of years Venetian glass, largely because of the quality of local craftsmanship, has been famous in all the markets of the world. This painting represents a scene in one of the workshops of Venice during the 19th century. Women have brought food and wine to the workers and have stayed to exchange pleasantries. The informal atmosphere in such a workshop offers the greatest possible contrast with the usual settings of modern work. Whatever may have been gained by our heightened productivity, there can be no doubt that something has been lost in the transition from the workshop, where workers were supreme, to the factory, where the thinking tasks are wholly delegated to "managers." (Courtesy Metropolitan Museum of Art.)

6. *Identification with the Producing Group*

We have already indicated that another essential for the calling out of the worker's best efforts is the identification of the worker with the productive group to which he belongs; and this again is one of the most difficult ideals to realize in modern industry. This is because industrial organization has taken place, not in response to the needs of the operating personnel for efficiency in production, but as a function of the financing and profit-making activities of business. So far, most industries have been organized and run not to make goods but to make money, and where making money has meant the stoppage of making goods, there has been no hesitation on the part of the managers to interrupt production.[3] Any such interruption of operations in the productive organization must, of course, throw the whole highly organized machinery for producing out of gear. A plant which stops, disbands its workers, and loses their experience, their loyalty, and whatever efficiency there may have been in their collective adjustment to each other. When a plant which has been stopped resumes work it must recreate this whole difficult *esprit de corps* and find again the delicate adjustment of functions one to another. This is always a heartbreaking period for the executives responsible for production and one which they undergo only with the greatest reluctance.

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[3] Cf. W. C. Mitchell, "Making Goods and Making Money," *Proceedings* of the American Society of Mechanical Engineers, December, 1922.

It is the executive, responsible for organization, and the engineer, who have to keep the machinery of industry running smoothly, who are in the best position to see that the worker must feel himself completely identified with the productive group to which he belongs in order to work with any enthusiasm at all for the collective product being turned out. Interruptions of operations for purely business reasons are the great enemy of this feeling of identity and individual responsibility to the group. But the operating personnel is helpless.

The toolmaker is one of the most highly skilled of modern workers. Such men as this must be given a sense of responsibility if industry is finally to fulfill the conditions required for a decently rounded life. These "aristocrats of labor," by virtue of the skill and intelligence they bring to their work, and by the dependability of their judgment, are a reserve of managerial brains which we have not as yet learned to use effectively. (Courtesy General Electric Company.)

The industry was planned and organized, as we have said, for business purposes—perhaps to divide the market and control sales for the purpose of raising prices to consumers; perhaps for the purpose of combining to run competitors out of business; or perhaps for the purpose of making a profit from the stock sales involved in combination—and none of these have anything to do with the operation of the industry. As a matter of fact business men sometimes build up curious industrial institutions entirely irrelevant to the requirements of operating efficiency; so that those who are in charge of operation, and much more, of course, the workers who are the rank and file of the operating personnel, fail to feel an identity of interests with all those other individuals with whom they have been brought into a single organization for purposes not of producing goods but of making money. When this occurs it is quite impossible to build up throughout a business structure that *esprit de corps* which is so necessary if men are to be persuaded to function efficiently in the production of goods. It seems necessary to subordinate purely business considerations to operating criteria; in other words, to make the engineer supreme.

We may even go further and say that an inescapable requirement for productive efficiency in modern industry is that the worker should not only feel himself a part of the group and have long association with it so that he feels tied to it emotionally; but that also he should have such a stake in the business that he feels a sense of personal responsibility for its proper functioning; and there is no other way to achieve this sense of personal responsibility except by permitting him to become part owner and therefore a part director of the organization itself.[4] The obvious advantage in this is that it re-creates something of the well known fidelity to the industry as an institution which we see, for instance, in the small shopkeeper or which we might have seen if we had lived during the time of craft industry. If the industry is partly the worker's he must feel that criticism of its operation or its product is in part a criticism of him and it must hurt him to hear such criticism just as it must please him to hear praise of it. Until that sense of responsibility has been developed there can be nothing like the needed development of enthusiasm for voluntary endeavor in industry.

7. *Social Approval for Productive Efforts*

We have already suggested also that workers must be given not only a certain sense of responsibility and control within the industry itself but a certain social approval for their productive efforts from sources outside the industry. For a man's whole life is not his working life. Yet we can see that his working life must be made an integral part of his whole life if it is to be unified and complete, not departmentalized.

As things are now there is undoubtedly a very dangerous tendency to separate the activity of the working life from all the other activities in which people engage, and so to make of it something separate and apart—something which bears no relationship to the home, the school, the church, and the other social institutions through which men express themselves. This is, it must be said, mostly a result of the separation of the home and the place of work; for under the guild and the craft systems the home was the place of work and this was also true, of course, of rural communities everywhere.

The farm, par excellence, is a double workshop. On the farm are grown crops, of course, but there is also created there a home and a way of life, distinctive, and on the whole satisfactory, just because of its close relationship

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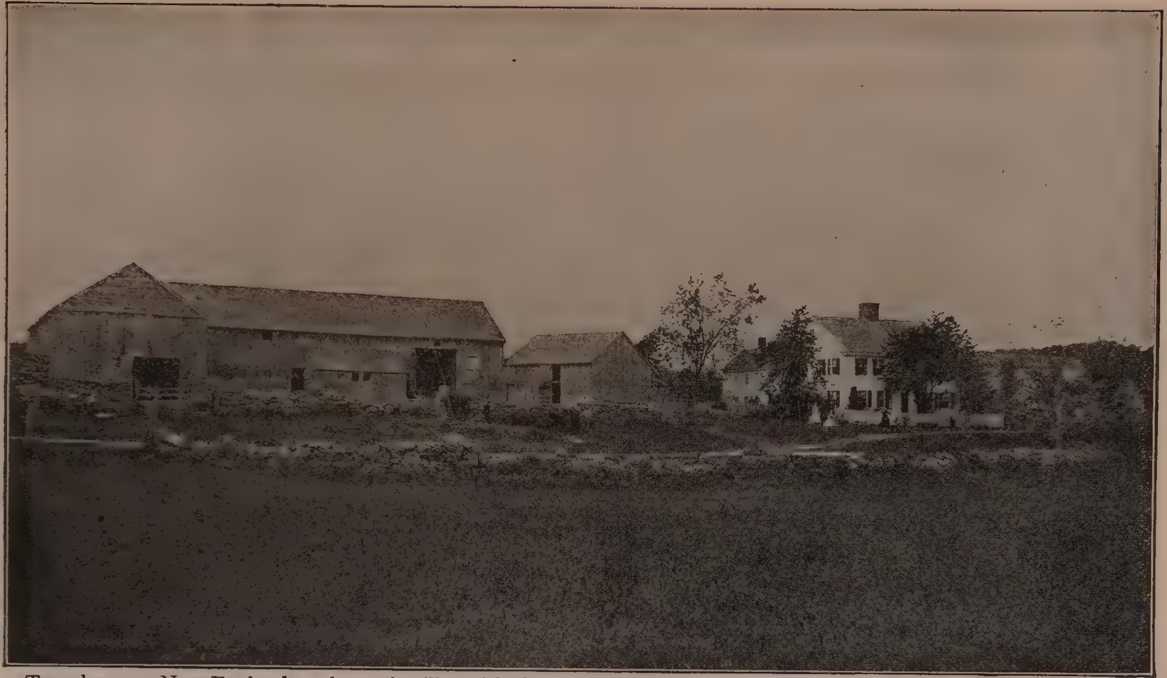
[4] The authors, after several years of discussion on this point, find themselves entirely willing to accept the implications of this statement. They do not mean what Professor Carver refers to in his *Present Economic Revolution in the United States;* in fact they feel that small importance is to be attributed to gifts of stock to employees or even sales of stock as they have been conducted. What they have in mind is something of a syndical nature perhaps; certainly it involves an alliance of technicians and workers as against absentee owners. They would not slight the problems of discipline and direction involved; but they believe these to be less difficult of solution than the great problem of industry at present: how to motivate work. Nor would they neglect the claims of consumers. They simply feel that jobs belong to workers, always have belonged to them of right, and always somehow must.



Travelers on New England roads are familiar with these old self-sufficient farmsteads. This Ross Wyman farmhouse on the Boston Post Road dates from the early nineteenth century, and is typical of the settings in which our most typical American culture was formed. This picture, made in the Eighties, shows the old shuttered house with the fenced yard in front; the cow and hay barns, the gate to the lane, the stone walls which, as Mr. Frost says, "made good neighbors," and the grass meadow across the road. Here life was full, perhaps, of duties, but it was, in a sense we no longer know, self-contained and independent. Neighbors were probably a half-mile distant, the roads were unimproved; there are no wires to be seen, and no machinery. (Courtesy of The Society for Preservation of New England Antiquities.)

with productive activities. The man and the woman involved are genuinely partners, each managing a department, but each coöperating fully with the other. Each knows what the other does. Each gives the other the praise or sympathy in the crises of life which is so precious a reward and so full a consolation.

When we contrast this life with that which is lived in urban centers we see how great a change is involved. Where industry has been moved into huge factories, and the home life is carried on at considerable physical distance and certainly at very great spiritual distance, and where the wife no longer understands the problems involved in the husband's work, she no longer feels a sense of responsibility for increasing his productivity because she does not understand how, specifically, that can be done; and even less, of course, do the children of the family understand what it is the father does while he is away for so many hours of the day, and what the relationship is that his absentee activities bear to their own interests in existence.

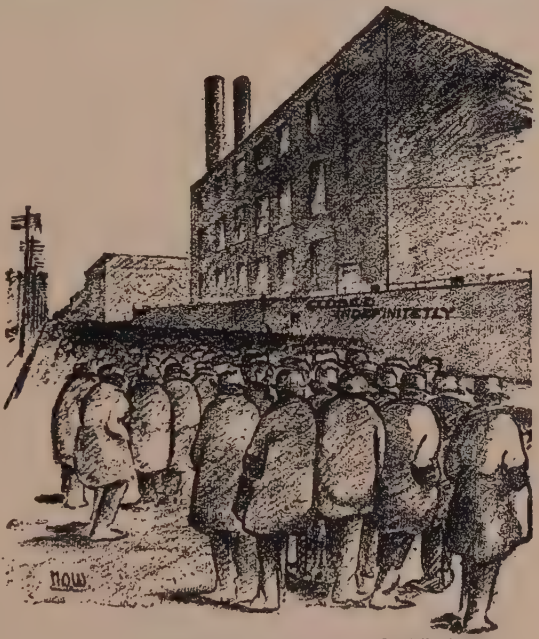
A farm haying scene—with the family participating as never in urban industries. (Courtesy National Child Labor Committee.) (Photo Hine.)

The consequence of this is that the family, which includes those individuals dearest to the man and whose praise he therefore values most highly, yields him none of the rewards of confidence and approval which were once the main support of the worker's productive efforts. And, if this is true of his family, it is even more true of his neighbors, who are perhaps engaged in other activities, and even in other factories, so that when he goes to church with them or meets them in social gatherings of other kinds, he cannot feel that sense of a community of responsibility and understanding which he might feel if there were among them productive activities being carried on in common.

How to recreate this social approval for productive efforts is very difficult to see so long as industry is carried on so completely separated from the home as it is at present; but there may be a suggestion of a way out in some of the developments we can see in industry at the present time. There is a tendency, for instance, to create garden cities and to make the factory merely the center of the other social activities of the village life; and to make it not only a place of work but also a place for social gatherings, and for the creation of all the institutions which go to make up a rounded community. We cannot here develop further a description of the possible ways in which a recovery of this lost approval for productive activities can be effected. We must be content simply to point out that this must be a necessary feature of the industrial future if that future is to use more completely the productive energies of human beings.

8. *Safeguarding Health and Tenure*

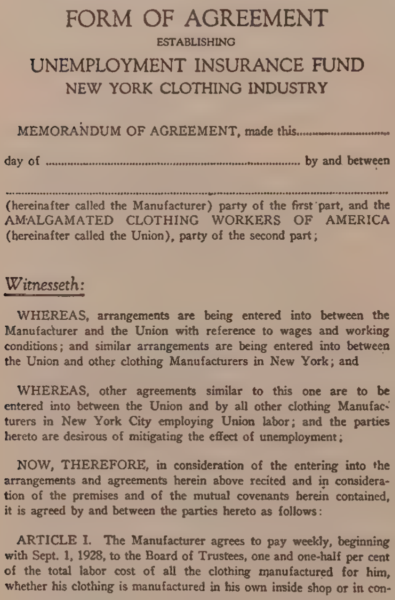
Along with these other considerations, it may be well to add that industry needs also, if it is to utilize human energy more effectively, to safeguard the long run period of activity of man. And this again is a department of life which has been intolerably neglected in the development of industry, largely it must be said, because industry did not develop as a social institution, but primarily as an institution for the making of profit.


CLOSED
INDEFINITELY
NOW
Drawn by Harry O Williamson

THE RIGHT TO WORK?
(Courtesy *Hobo News*.)

When industry existed in small units and when it found these subject to the recurring depressions which sweep over the whole field of industry, it defined its relationship to the individual workman in very selfish terms. It accepted none of the responsibility for his lifetime activity; it accepted responsibility only for the payment to him of a stipulated wage for a very short time. Usually, it did not guarantee his employment for longer than the day or the week or, possibly, the month for which he had been engaged; but since workmen are shortsighted and also since they are weak in bargaining, wages had a constant tendency to fall to the level which would support a family for the period for which the wage was paid.

The result was that if a worker received a wage for a week, it was likely to be no more than enough to keep his family for a week. If his employment lasted for a few weeks and then there followed a period of unemployment, it would involve privation and hardship, often of unbelievable severity, for the dependent family. Public opinion, and the organization of the workers, alike, have shown a considerable tendency to bring about a change in this respect. Organized workers are demanding that they receive a wage sufficient to carry them throughout the year. They are saying that it is the responsibility of the industry, to which they devote their efforts, to provide them, not with part-time employment but with full-time employment. And public opinion is beginning to rise against the social results inevitably associated with periodic unemployment for workers, and to say that industry and not the community shall bear the responsibility for the provision of a continuous living wage for workmen. In this, however, as in so many similar changing situations it is easy to substitute what we hope for in the future for the reality of the present. No one who is familiar with the practices of great manufacturing corporations can escape the impression of overlordship, of dominating ruthlessness which breaks out at the slightest provocation and which extends to the use of public powers for private benefits whenever that becomes possible. Many groups of workers are at present held in a subjection which is little short of slavery, their wages low, their jobs uncertain, their dependents living in miserable circumstances. We do believe, however, that these instances grow somewhat fewer.



FORM OF AGREEMENT
ESTABLISHING
UNEMPLOYMENT INSURANCE FUND
NEW YORK CLOTHING INDUSTRY

MEMORANDUM OF AGREEMENT, made this..............................

day of .... by and between

....

(hereinafter called the Manufacturer) party of the first part, and the AMALGAMATED CLOTHING WORKERS OF AMERICA (hereinafter called the Union), party of the second part;

Witnesseth:

WHEREAS, arrangements are being entered into between the Manufacturer and the Union with reference to wages and working conditions; and similar arrangements are being entered into between the Union and other clothing Manufacturers in New York; and

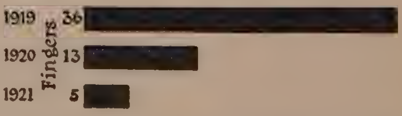
WHEREAS, other agreements similar to this one are to be entered into between the Union and by all other clothing Manufacturers in New York City employing Union labor; and the parties hereto are desirous of mitigating the effect of unemployment;

NOW, THEREFORE, in consideration of the entering into the arrangements and agreements herein above recited and in consideration of the premises and of the mutual covenants herein contained, it is agreed by and between the parties hereto as follows:

ARTICLE I. The Manufacturer agrees to pay weekly, beginning with Sept. 1, 1928, to the Board of Trustees, one and one-half per cent of the total labor cost of all the clothing manufactured for him, whether his clothing is manufactured in his own inside shop or in con-

Unemployment insurance reduces insecurity. Many countries—outside the United States—have governmental plans for effecting it. It is not very prevalent here but a few industries and a few labor unions have introduced it privately. (From an Unemployment Insurance Agreement. Used by permission Amalgamated Clothing Workers of America.)

The pressures of opinion which are being brought to bear upon industry find themselves more effective because of the development of large-scale industry in recent years, for, as industries grow larger, the adherence to them of their personnel becomes of greater significance, and as they increase in scope and size, the part they play in the whole community becomes clearer; so that, while to a great extent the government has found it expedient to force employers' hands in the matter of workmen's compensation for accidents and for unemployment and old-age insurance, industries themselves sometimes voluntarily adopt schemes for insurance against unemployment and for provision against the coming of old age.



This chart shows how a safety campaign in a metal working plant reduced finger accidents. (Adapted from *Industry Illustrated*, May, 1925.)

It would probably be possible to expand this description of the ways in which human energy might be increased and more effectively used in industry to include a great many other factors and forces which are at work in the modern world; but perhaps sufficient has been said to indicate that there is great room for improvement in these respects, and that at the same time vast changes are under way which, on the whole, seem to promise the almost total reconstruction of industry in the interest of utilizing the human energy which has been treated so cavalierly up to now. If we have used human beings to the limit of their capacity and then thrown them aside like pieces of worn-out machinery, the time has almost arrived when it will no longer be possible to do this and when the first task of the organizers of industry will be to see to it that the organization is carried out with a direct view to the normal functioning of human beings in all the varied tasks of the institutions of industry which furnish the goods and services upon which we depend for our means of subsistence.

CHAPTER 14

DIRECTING INDUSTRIAL ENERGY TO DESIRED ENDS

1. *Making Goods and Making Money*

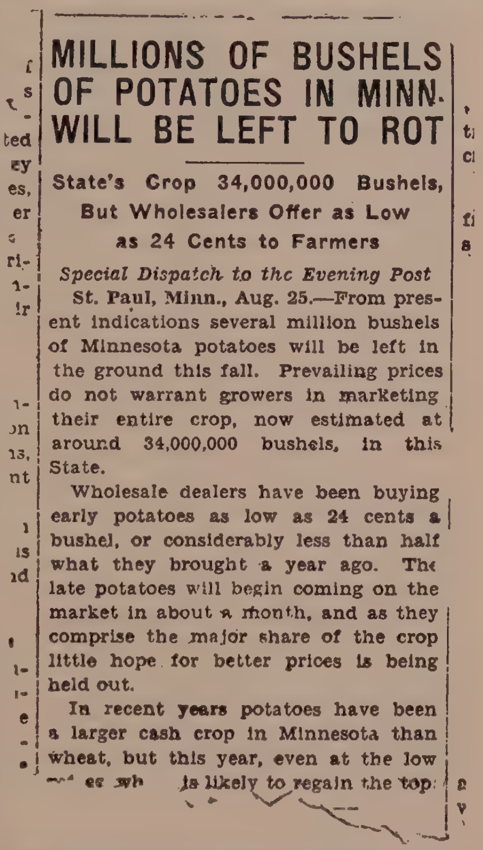
We have already suggested, in one or two places, one of the very deep, inherent difficulties with the organization of modern industry: the opposition between making goods and making money. This is one of the paradoxes of industrialism which we meet at once in considering the problem of so organizing human and natural forces as to eliminate waste and to direct all energy to the desired end of production. For these opposing purposes are almost always present when a policy is being formed. In a system such as ours where goods are valued by their purveyors not for their possible uses and their desirability as instruments of life, but for their exchangeable value in the markets, it is often possible to make more profit by withholding them than by furnishing them in unlimited quantities.

If a business were rewarded and the individuals in it received their pay because, during a certain period, they managed to produce a certain standard number of useful goods, there would be no difficulty. But in our system of business, pay is not based upon the physical amount of goods produced, but upon the power of these goods to command other goods in exchange for themselves. This power to command other goods economists sometimes call exchange value. It is, as we have already explained, to be contrasted with use value or the value of the thing to the individual rather than in the market place.

It may be argued, of course, that these two kinds of value are synonymous; but this can scarcely be true in a world whose factories are closed and whose people are at the same time wanting very much the goods those factories make. It is evidently not a sufficient incentive to production that the world needs goods. If mere desirability were the reason for producing, and if the producers' rewards were gauged by the needs of men they supplied, such a paradoxical situation could not arise. Many reformers, of course, have concentrated their attention upon this situation and attempted to construct an imaginary world in which goods were produced to meet needs.

Thinkers have based a long line of Utopias upon this idea, but perhaps none of them has possessed a more effective logic than Karl Marx, who built up from the contrast of making goods and making money the whole doctrine of socialism in production and communism in use; Henry George also saw in his program for expropriating the increasing social values of land—the "single tax"—the possibilities of mitigating the hard circumstances of modern life. It was Henry George who coined the famous phrase, "progress and poverty," putting the two in that same juxtaposed contrast which we have been employing here. "Progress"—the growth of material prosperity; and poverty—lives lived in want. But none of the reformers with his system of reform has been able sufficiently to capture the imaginations of people to persuade them to its adoption as a whole social program.[1] Nevertheless, it is not often denied that the premises upon which their arguments were based are true enough: that the production of exchangeable values is a very different thing from production for the satisfaction of a people's wants.

It is a fact that industry produces its goods, not in a continuous stream in answer to the needs of peoples everywhere, but in a constantly interrupted stream in answer to the demands of those who are best able to pay for them. This may very well lead, and as a matter of fact does lead, to the making of goods which can be justified only by the fact that some one is able to pay for them. The more expensive luxuries of life would never be manufactured at all in an industrial system which produced goods only to answer needs.



MILLIONS OF BUSHELS OF POTATOES IN MINN. WILL BE LEFT TO ROT

State's Crop 34,000,000 Bushels, But Wholesalers Offer as Low as 24 Cents to Farmers

Special Dispatch to the Evening Post

St. Paul, Minn., Aug. 25.—From present indications several million bushels of Minnesota potatoes will be left in the ground this fall. Prevailing prices do not warrant growers in marketing their entire crop, now estimated at around 34,000,000 bushels, in this State.

Wholesale dealers have been buying early potatoes as low as 24 cents a bushel, or considerably less than half what they brought a year ago. The late potatoes will begin coming on the market in about a month, and as they comprise the major share of the crop little hope for better prices is being held out.

In recent years potatoes have been a larger cash crop in Minnesota than wheat, but this year, even at the low ... is likely to regain the top

Not only in agriculture but in other industries as well does withholding of this sort take place. It is not always done either because there is no profit in marketing more; sometimes factories are closed to maintain a high price and protect a high profit, rather than to avoid an actual loss. (Used by permission. From N. Y. *Eve. Post.*, August 8, 1928.)

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[1] Possibly it is necessary to except Russia, though to the observer from without Marxism seems neither to have supplied the motive force nor the program of the revolution. Possibly also it ought to be noted that some cities have seemingly adopted one distinction of Henry George's—that between "land" and "improvements"—and show some tendency to tax "land" more heavily than "improvements." But this is something less than the adoption of the "single tax."

But there is another injury also to the consumers of necessities. The managers of a factory which is capable of turning out a very large amount of product will often find that they can enlarge the net earnings of the business by stopping the plant at periodic intervals, thus reducing the supply of the goods they manufacture, and forcing people to pay more than they would otherwise have to do. This of course can only happen when there is a virtual monopoly of the product in the hands of the managers of the business; but this is not at all an unusual circumstance in the highly organized state of modern industry. A monopoly need be only such an arrangement as effects a control of price, not one which brings all the business making the product under one ownership.[2]

One difficulty here is that monopolies are more likely to be gained in the purveying of those staple goods which are the necessities of life than of other goods which are its luxuries. It will, perhaps, be said that if these goods are *necessities* the price of them can scarcely be forced up because people will not have sufficient incomes to pay increases in price, that increases in price can only be paid by people whose incomes are more than sufficient to meet the requirements of a comfort level of life. The answer to this, of course, is that the consumption of the goods is reduced and that, instead of buying as large a quantity as they need or would like to have, people find themselves forced to do without. This is the way in which the price of even a necessity may be raised. The business which sells the goods finds itself profiting more under these circumstances because it sells its reduced output of goods at a sufficiently high price so that the whole amount of its return is greater than would be the case if operation were continued at maximum capacity and the goods sold for what they would bring in a completely satisfied market.

Professor J. A. Hobson, the distinguished English economist, considers this problem in a recent article. In speaking of productivity as the source of well-being he says:

> Now, let us provisionally accept the hypothesis that more productivity is the safe and sufficient remedy, and seek the conditions of this productivity. The problem presents at present a very different face in Europe and in America. In nearly every European country the productive machinery is working slow, by reason of war and post-war damage to its finance, capital, labor efficiency, and markets. This damage is represented in unemployment, underemployment, and poor production. America, but lightly touched at present by Europe's economic disorders, presents to every European eye a spectacle of abounding prosperity, shared it appears substantially, though unequally, by a large majority of her population.

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[2] The follow-the-leader policy which characterizes much American business is meant here. It may come about through formal or informal associations. It is sometimes said that "businesses are more apt to vary production schedules than prices." This is frequently the result of inter-business arranging of an informal sort which has many of the advantages but entails none of the legal disabilities of "monopoly."

A great people so well fed, clothed, and housed, and endowed with so much mobility and automobility, has never before been seen.

And yet in every gathering of business men and of economists it is argued that much more could and would be produced if——If what? If certain changes and improvements in the working of the economic system were attained. But they hasten to add "without any radical alterations in ownership and operation of the existing system, either on the part of labor, the state, or the public." Thus the question is fairly posed. Even in America the machinery of production is wasting power, by low functioning of labor or plants, or both, by inferior technique and organization, unreliable finance, unsatisfactory transport and marketing arrangements. How big the total waste is, nobody can do more than guess, and the guesses vary from, say, 50 per cent to 200 per cent. If the natural and human economic resources of the country were fully utilized, even up to the highest standards of equipment and operation actually in use, is it too much to expect that the output of available wealth would be doubled? At any rate, such an enlargement, and more, could safely be predicted for England, and for any industrialized European country. Such enhanced productivity we could take out in more goods and services or more leisure and enjoyment of life. Though the available natural resources will vary widely for different communities, sound trade relations will in large part pool any special advantages, as also the free flow of economic knowledge will generalize the command of man over nature, now admittedly adequate to supply all his legitimate needs.

What holds us back from realizing this economy of high production? It is necessary, first, to make it clearly understood that the "holding back" is at all points a more or less conscious policy of men engaged in industry. Restriction of output, for prolongation of the job, for spreading employment, sometimes also from laziness or for a check on "profiteering," is charged against the individual workman or the labor unions in many trades, with a considerable element of truth. Though, as we see, other motives may enter, the main pretext for this individual, or collective "Ca' Canny" of workers is the belief, often well founded, that markets furnish no security for full continuous employment, and that, if they put out too much work, short time or stoppage will ensue. Economic sermons from economists upon the elasticity of demand which will necessarily follow low labor costs, and will reward the worker for his greater efficiency, fail to carry the necessary conviction to his mind. He has no faith in an early and inevitable expansion of the market for his personal labors. "In the long run" it may work out so, but from the necessity of his situation he is concerned with the short run. Blind to his own true interest, perhaps! But in Britain, at least, and to a smaller extent in America, labor is restrained from pursuing a policy of high production.

But what of the business men themselves who never tire of urging workmen to put forth their utmost energy so as to keep down costs? In times of rising prices and high profits they seek, indeed, to run their plants at high pressure. But at the back of their minds there is always a haunting fear, based upon long experience, that this policy of maximum production cannot last, that prices will soon decline, contracts fall off, profits disappear unless they and their competitors arrange to slacken the rate of output. This plainly recognized need to limit output, in order to maintain a reasonable level of prices and of profits, is the main incentive to the formation of trusts, combines, associations, agreements, by which cutthroat competition is suspended or displaced in most organized trades. The management of machine industry continually keeps a watchful eye upon the markets lest they show signs of being overstocked, in which case some slowing down of production will be expedient. Just as the worker fears the cutting of wages if he works too fast, so the employer fears the cutting of prices if his plant turns out too much. Mr. Veblen, no doubt rightly, exonerates the manager, as engineer, from blame for this periodic or, in some instances, chronic sabotage of industry, imputing it to the domination of finance, or "the price system." But the point is that amid all this talk of the need and duty of high productivity both capital and labor in their several interests tacitly and consciously agree upon restricting output. Though as a fully conscious business policy this restraint applies chiefly to the great standard manufactures and their raw materials and power, agriculture and most minor trades have the same dread of overstocking their market.

But there are other conscious policies of business men in most industrial countries that are hostile to the achievement of high productivity. Adam Smith rightly laid down the basis of his science of wealth in that division of labor, according to which men as individuals, local groups, or nations applied themselves specially or exclusively to the sorts of work for which they were, by their capacities, inclinations, and natural resources, best qualified, exchanging their diverse products with one another on the easiest and freest terms of commerce. Such is the efficient economy of maximum productivity for the economic world as a whole and for each person in that world.

But there have always been persons, or peoples, who, because their minds, by malformation or miseducation, see trade in terms not of coöperation but antagonism, or because they are dominated by other noneconomic considerations, set themselves to place obstacles in the way of this productive policy. As workmen they seek to stop other men from entering "their" trade, as business men they try to stop outside capital from entering "their" industry, as tariffists and hundred-per-centers they will check the free flow of foreign brains and labor and foreign goods into "their" country. This shortsighted selfishness in its narrower forms they dignify as trade loyalty, in its wider form as "patriotism" or "national economy." Without prejudging the question whether other considerations may or may not rightly override the gains of productivity, it is important to realize that all such measures rank as interferences with maximum productivity, and that all members of that coöperative society and all mankind must pay for them in reduced wealth. It may perhaps be urged that there are favored plots of earth, possibly whole countries, where this exclusive policy ranks as enlightened selfishness, countries virtually self-sufficient and able to keep their advantages for their own people. This possibility for the United States I will reserve for later examination; here merely noting that the presumption is against it as impairing the wider division of labor upon which the aggregate dividend is based. The setting up of tariff and other interferences with free movement of persons, money, or goods ranks as a practical repudiation of the gospel of social-economic salvation by high productivity. In many subtle ways it diminishes the productivity of the average man both within the protected area and outside. It may be said, and with a measure of truth, that the advocates of such policies, business men or statesmen, do not admit that their motive or result is a restriction upon wealth production. They often assert and possibly believe the contrary. But, when one probes their feelings and notions a little deeper, one soon discovers that the fears of foreign goods "invading" "our" markets involve a belief that an excessive supply of goods for sale must lower prices, drive the profits of "our" industries below zero, and spread unemployment among "our" workers. So we perceive how a cloud of witnesses give the lie to the fine professions about "productivity" as the simple and sufficient remedy for poverty and discontent. For it is not the niggardliness of nature nor the backwardness of science, nor the inefficiency of labor that checks productivity, but the refusal of man to set science to do her best with nature. Employers, workers, politicians conspire to hold back productivity and so halve the real income they might enjoy. Why do they do it?[3]

Thorstein Veblen, an American economist who was notable for his ironical analysis of our business institutions. There is a sharp antithesis, he maintained, between the activities of making goods and those of making money. Making goods is only incidental to making money and frequently suffers from our having identified it with profit making. (Courtesy A. Veblen.)

2. *The Individual and the System*

So we get the contrast between making goods and making money As we have said before, this contrast is one between the engineering point of view and the business point of view. The engineer is the technician of industry. It is his job to assure the smooth and continuous operation of its forces and any interruption of operation throws his whole scheme out of balance. These considerations are a very minor matter to the business man as such, except as they affect costs perhaps, and so profits. He is interested mainly in the final difference that exists between these costs and the total income from sales, and, as we have said, this interest is often best served by the stoppage of the plant and the cutting down of production, rather than by the development of the greatest efficiency possible and turning out the greatest product that the machines and factories under his control will manage.

And so we see the very system of business we have built up has in it this germinal quality of degeneracy. The very fundamental reason for the permission society gives to the business man to exist and to carry on his activities, is that his business shall function in the social system as the producer and the purveyor of the goods which form a standard of living, and no specious argument of individual necessity can cloud this final issue. Instead of performing this social function the business man often finds himself in the position of having to withhold effort and to stop the operation of productive forces. This is, of course, through no individual fault of his own. He operates in a system under its usual rules and the measure of success for a business man is, of course, the profit he makes and the profit he makes is determined by the difference between his costs and his returns from sales. He finds himself, reluctant or not, as he may be, in the position of having to conform to the rules of the game which he did not make and which he cannot change. Only society itself can change the rules of this game and prevent the withholding of effort which has crept so insidiously into the industrial machine and threatens to overcome all our advances in technical efficiency.

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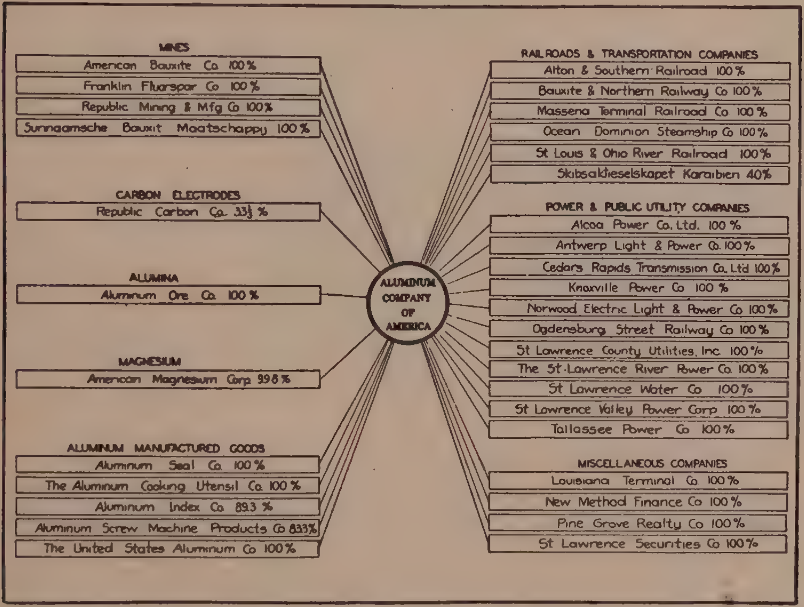
[3] *The Nation,* cxx, 290–93 (Mar. 18, 1925). Quoted by permission of the author and the editors.

It is worth noting also that the laborer has learned a lesson from the business man. He has seen that if he must sell his effort in a market, the less there is of this effort the higher the price he will receive for any given quantity of it. His interest, therefore, lies not only in producing effort but in limiting its amount in the interest of getting the largest net returns. And so we find organized labor given over to the policy of giving as little as it can for as much as it is possible to get. In fact, this last phrase, giving as little as possible for as much as it is possible to get, might be taken as the motto of our whole business system.

To the inquiring mind, which clears itself of any prepossessions in favor of the going system, it is difficult to understand just how it is that such a system grew up in the first place, or was permitted to continue to exist in the second place, for it is by this withholding of effort that society applies a needless brake to the wheels of the progress it has labored so hard and so long to set running. The effort to organize industry in the interest of directing energy to desired ends must have, as one of its very first objects, elimination of this withholding of effort and the complete going over to the principle of operation for the production of goods rather than profit. Management will not confine itself to its real job of directing production rather than rigging the market or withholding product or effort in order to establish a higher price, until the whole system is changed under which these doubtful activities receive a reward. Society must give its rewards only for productivity, only for industrial service, and it must rigidly withhold the encouragement it now gives to those individuals who do it not the greatest service, but the greatest disservice.

3. *Increase in the Size of Business Units*

Another consideration in organizing human and natural forces so as to eliminate waste and direct all energy to desired ends is to achieve the most efficient physical industrial arrangement which is possible. In recent years, the most efficient arrangements have usually seemed to be those involving most specialization, most centralization, and most combination, but this has not been invariable, for although large business has, for the most part, grown at the expense of small business and combination has taken the place of competition, there are some small businesses which appear to be still the most efficient for some purposes. Combination may be efficient only for the getting of a high price by stifling competition through unfair means rather than for the establishing of greater efficiency in production. It may again be premature or unwieldy and so bring no real saving in energy. But, on the whole, it must be said that the history of industrial combination in the United States in the last fifty years offers the general picture of increase in size of the business unit. This is so general, and the reasons for it appear so plain, that the observer is forced to the conclusion that the development of large-scale business is really more efficient for production. If this is so, then combination is here to stay. Persons who argue that the so-called trusts are necessarily inefficient because they establish themselves by trickery, by brute force, or by the corruption of government officials, have plenty of illustrations of this kind of thing in the history of trusts in the United States; one has only to read the histories of the Standard Oil


MINES
American Bauxite Co 100%
Franklin Fluorspar Co 100%
Republic Mining & Mfg Co 100%
Surinaamsche Bauxit Maatschappy 100%
CARBON ELECTRODES
Republic Carbon Co. 33⅓%
ALUMINA
Aluminum Ore Co 100%
MAGNESIUM
American Magnesium Corp 99.8%
ALUMINUM MANUFACTURED GOODS
Aluminum Seal Co 100%
The Aluminum Cooking Utensil Co 100%
Aluminum Index Co 89.3%
Aluminum Screw Machine Products Co 83⅓%
The United States Aluminum Co 100%
ALUMINUM COMPANY OF AMERICA
RAILROADS & TRANSPORTATION COMPANIES
Alton & Southern Railroad 100%
Bauxite & Northern Railway Co 100%
Massena Terminal Railroad Co 100%
Ocean Dominion Steamship Co 100%
St Louis & Ohio River Railroad 100%
Skibsaktieselskapet Karaibien 40%
POWER & PUBLIC UTILITY COMPANIES
Alcoa Power Co. Ltd. 100%
Antwerp Light & Power Co. 100%
Cedars Rapids Transmission Co. Ltd 100%
Knoxville Power Co 100%
Norwood Electric Light & Power Co 100%
Ogdensburg Street Railway Co 100%
St Lawrence County Utilities, Inc. 100%
The St. Lawrence River Power Co. 100%
St Lawrence Water Co 100%
St Lawrence Valley Power Corp 100%
Tallassee Power Co 100%
MISCELLANEOUS COMPANIES
Louisiana Terminal Co 100%
New Method Finance Co 100%
Pine Grove Realty Co 100%
St Lawrence Securities Co 100%

This chart shows the interrelations and the centralization of control in a typical group of major and subsidiary enterprises. The percentage figures indicate the central concerns' holdings in the allied corporations. A similar situation exists in many other industries—the last decade, especially, has been crowded with mergers and consolidations. (Courtesy Aluminum Company of America.)

Company, the International Harvester Company, the National Cash Register Company, the National Sugar Refining Company, or of many other such combinations, to learn that all that has been said concerning their viciousness is true, but more important than all these facts which are today undisputed, there remains the fact that they have proved actually more productive than the smaller units which existed before they were combined.

A picture of business in the United States today is a picture of gigantic corporations, covering, each of them, a large part of the field of the various industries and controlling the output of the product that is created by that industry. This combination, of course, has not always taken the form of the creation of a gigantic corporation which literally owns the whole physical property of the industry. It may be achieved by different kinds of arrangements among the businesses themselves. It may be that there is only the kind of understanding usually employed in trade associations, or it may be that one company owns a controlling share in the stocks of several other companies which would otherwise form competition for it. We shall discuss these forms of combination somewhat more at length later on, but the main point here is that, however they are formed, these are, to all intents and purposes, combinations which control the amount of production and so the price of the product.

4. *Social Policy and Combination*

In the effort to see how society can best direct this development of combination in industry so as to bring out of the movement the greatest application of human energy to production, it is first of all necessary to admit the genuineness of the savings made and the actual superior efficiency of larger-scale production. It may be, however, that the best interests of society are scarcely served by the combination into one firm of the concerns owning factories in different parts of the country, for each of them must attain by itself whatever efficiencies are possible. There is no gain from reducing duplicated effort here. On the other hand, it may be that general planning for the necessary output of the whole industry can only be attained by the combination of all the plants which are involved in the output of the product and in such a case, of course, nothing less than complete combination in the industry would have the desired effects.

The difficulty with this combination, of course, would be that although it was formed for purposes of achieving superior productive efficiency and the coördination of productive effort, it might, when once attained, be used for purposes of the exploiting of the consumers of its products. This could only be prevented, of course, by some kind of official regulation and control of the various forms of industrial combination.

The first reaction, as would be expected, to the combination movement of the nineteenth century, was the attempt to smash all combinations and to return to what was then believed to be the most desirable basis for economic organization: the system of *laissez faire*, or free competition in industry.

This was on the theory that competition always reduced prices to the level of the cost of production and therefore achieved all the protections for consumers which could be desired. We are inclined to the view now, however, that the smashing of large combinations and the return to the small industrial units may involve such very great inefficiencies of operation that it would be better to permit combination even if the result were a control of price, because even with controlled prices, they might be lower than they would be in a system of free competition with its high producing costs.

Minnesota Transfer—a freight distributing yard which serves the vast Northwest. The railroads are facilitating mechanisms which serve all businesses alike—under strict governmental supervision. (Courtesy Great Northern Railway Company.)

The whole policy of the United States with reference to this combination movement is still in a very fluid state. Our legislatures still seem to cling to *laissez faire* ideas and are afraid to recognize combinations and to attempt to control them constructively. But, on the whole, we do seem to tend in the direction of control, as for instance in the matter of the new proposed regional consolidation of our railway lines; it must be said, however, that there is an almost equally strong tendency to limit the extent to which this combination may be carried.

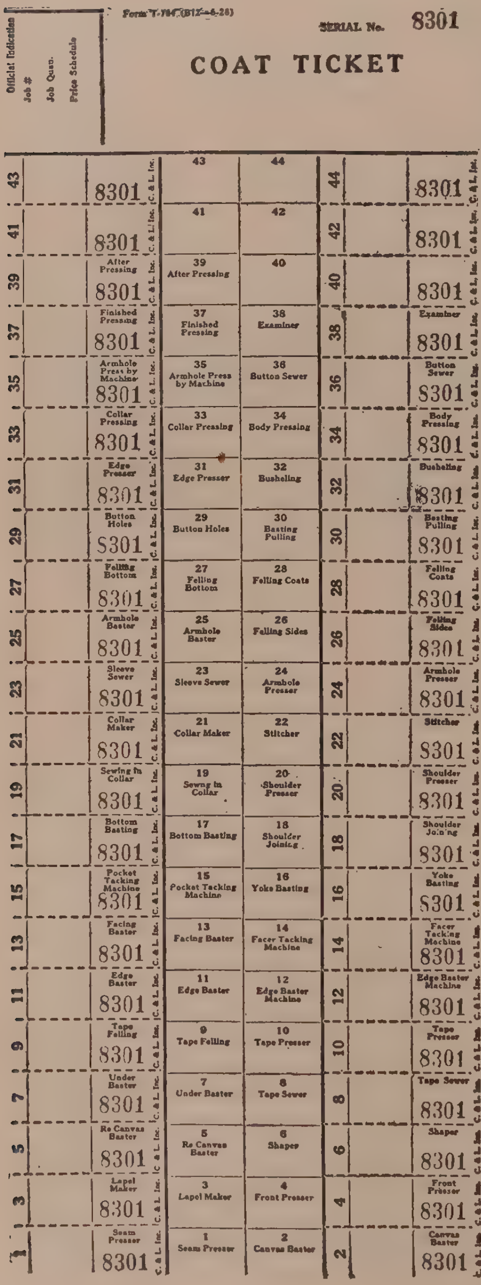
Although it seems to most economists, as a practical matter, that it would be most desirable to recognize the efficiency of combinations and to permit them to take place under proper direction and control, it is true that under the price system, combinations are perhaps oftener formed for purposes of control of price than to make efficiencies in production, and where this is true, there is no reason why combinations should be permitted. Then too, in all industries there is a very real danger of the loss of that individual enterprise and freedom for variation which were so conspicuous a feature of the development of industry under *laissez faire* and which it would be too bad to lose altogether. Excessive organization may very well have the effect of smothering progress. The most we can really say in this matter is that, where combination is useful, government regulation may be used to secure its benefits to the public and that all types of organization may very well be limited or so modified as to prevent the loss of the enthusiasm generally supposed to be superior in individual enterprise.

5. *Increased Specialization*

If it is true to say that there has been an almost continuous movement toward larger units in the field of business organization, it is quite as true to say that there has been a movement toward reducing the number of functions performed by each individual in industry. These two trends were complementary, as we shall see.

The contrast between the kind of work performed by most workmen now and that performed in any preindustrial time gives us a new view of some of our modern problems. To put it baldly for emphasis, the medieval worker did all the tasks involved in making, say, a pair of shoes. The modern worker does only one small, limited part of the whole task. He has become specialized in a sense that was never known in the preindustrial era. Then specialization consisted in confining the activities to making one thing; now specialization consists in doing perhaps a hundredth or a thousandth part of these activities.

Machines did not cause this specialization as is sometimes suggested. On the contrary, specialization made possible the machines. For tasks have



Official Indication
Job #
Job Quan.
Price Schedule

Form T-784 (B12—6-28)

SERIAL No. 8301

COAT TICKET

43	8301	C. & L. Inc.	43	44	44	8301	C. & L. Inc.
41	8301	C. & L. Inc.	41	42	42	8301	C. & L. Inc.
39	After Pressing 8301	C. & L. Inc.	39 After Pressing	40	40	8301	C. & L. Inc.
37	Finished Pressing 8301	C. & L. Inc.	37 Finished Pressing	38 Examiner	38	Examiner 8301	C. & L. Inc.
35	Armhole Press by Machine 8301	C. & L. Inc.	35 Armhole Press by Machine	36 Button Sewer	36	Button Sewer 8301	C. & L. Inc.
33	Collar Pressing 8301	C. & L. Inc.	33 Collar Pressing	34 Body Pressing	34	Body Pressing 8301	C. & L. Inc.
31	Edge Presser 8301	C. & L. Inc.	31 Edge Presser	32 Bushelling	32	Bushelling 8301	C. & L. Inc.
29	Button Holes 8301	C. & L. Inc.	29 Button Holes	30 Basting Pulling	30	Basting Pulling 8301	C. & L. Inc.
27	Felling Bottom 8301	C. & L. Inc.	27 Felling Bottom	28 Felling Coats	28	Felling Coats 8301	C. & L. Inc.
25	Armhole Baster 8301	C. & L. Inc.	25 Armhole Baster	26 Felling Sides	26	Felling Sides 8301	C. & L. Inc.
23	Sleeve Sewer 8301	C. & L. Inc.	23 Sleeve Sewer	24 Armhole Presser	24	Armhole Presser 8301	C. & L. Inc.
21	Collar Maker 8301	C. & L. Inc.	21 Collar Maker	22 Stitcher	22	Stitcher 8301	C. & L. Inc.
19	Sewing in Collar 8301	C. & L. Inc.	19 Sewing in Collar	20 Shoulder Presser	20	Shoulder Presser 8301	C. & L. Inc.
17	Bottom Basting 8301	C. & L. Inc.	17 Bottom Basting	18 Shoulder Joining	18	Shoulder Joining 8301	C. & L. Inc.
15	Pocket Tacking Machine 8301	C. & L. Inc.	15 Pocket Tacking Machine	16 Yoke Basting	16	Yoke Basting 8301	C. & L. Inc.
13	Facing Baster 8301	C. & L. Inc.	13 Facing Baster	14 Facer Tacking Machine	14	Facer Tacking Machine 8301	C. & L. Inc.
11	Edge Baster 8301	C. & L. Inc.	11 Edge Baster	12 Edge Baster Machine	12	Edge Baster Machine 8301	C. & L. Inc.
9	Tape Felling 8301	C. & L. Inc.	9 Tape Felling	10 Tape Presser	10	Tape Presser 8301	C. & L. Inc.
7	Under Baster 8301	C. & L. Inc.	7 Under Baster	8 Tape Sewer	8	Tape Sewer 8301	C. & L. Inc.
5	Re Canvas Baster 8301	C. & L. Inc.	5 Re Canvas Baster	6 Shaper	6	Shaper 8301	C. & L. Inc.
3	Lapel Maker 8301	C. & L. Inc.	3 Lapel Maker	4 Front Presser	4	Front Presser 8301	C. & L. Inc.
1	Seam Presser 8301	C. & L. Inc.	1 Seam Presser	2 Canvas Baster	2	Canvas Baster 8301	C. & L. Inc.

Some indication of the minute division of our modern work can be had by studying this record of piece work in coat making. The quantity of operations involved is shown by the number of separate tickets.

to become minutely restricted and rigidly repetitive before machines can perform them.

The logical end of the specialization of functions in industry is the reduction of all of them to their simplest movements and their performance by machines. This would leave to the men in industry only the task of keeping the machines running. We shall not reach this millennium for a while yet at least, if for no other reason than that it supposes a static economy which we do not have. So long as population grows and we make new inventions, discover new processes, and make use of new raw materials we shall remain constantly in a transition state in which the unperfected analysis of functions makes it possible for them only to be performed by men.

The fact that tasks tend toward repetition, however, makes a grave human problem, for, although the human body may in a sense be considered a machine, it was not formed as are industrial machines, with a view to the performance of repetitive tasks. It is a strain upon it to be forced to do them; and, incidentally, a great waste of its capabilities. It possesses also a mind influenced by the nature of the activities the body must perform, and which possesses the power to direct the bodily mechanism. If it is outraged by the activities of the body it will certainly revolt and drive the mechanism it controls into perverted and distorted action.

A worker specializing in the assembling of parts for radios finds little variety in his work. (Photo Hine.)

In the attempt to find the best way of directing human and natural energy to the desired end of production, there has then been a constant movement toward specialization and a constant revolt against it until it was taken over by machines. The direction of development obviously cannot be backward toward generalized work for that would not furnish the standard of goods we need. Inefficiency is involved. It must be then forward toward speeding up the logical end of specialization so that more monotonous and fatiguing tasks may be taken over by machines and men released from them.

6. *Interdependence and Coördination*

Along with specialization has gone a necessary corollary development of interdependence. For obviously the man who does one small operation upon the sole of a shoe is dependent upon those who perform the other operations contributory to his, if there is ever to be a finished shoe which may be sold to furnish income for all the workers upon it. So that along with the problems raised by specialization there have come into existence the complicated problems of industrial engineering which relate each task to every other and bring about so nice an adjustment of functions that just enough and no more effort may be spent at this or that form of effort and just enough and no more materials shall be provided to complete a carefully worked out production program.

We shall examine these problems somewhat at length in another chapter when we have gone a little deeper into the problems of the organization of the industrial unit. For it must be seen that we have always, in studying industrial efficiency, to keep in mind the twofold nature of the problem. We have to consider it both as an individual and as a group adjustment. From the individual point of view there is specialization and coördination; but for industrial groups there is a similar problem. Not only are the workers in a shoe factory interdependent, but they as a group are also dependent upon other industrial groups. They might wear their own shoes, but they could not wear them all; and certainly they could not eat them. Their relations to food-making and other industries are obvious. Both these phases of the problem need attention.

CHAPTER 15

BUSINESS ORGANIZATION AND OWNERSHIP

1. *The Entrepreneur*

It is perhaps true to say, in general, that this is the age of the corporation and that the day of the small business man is past; and yet there are still many small business men left. They carry on a great deal of the retail business of the country, especially, of course, in the small towns, and operate what remains of the handicraft industries, make fine furniture and clothes, or carry on businesses that exploit some small patent or other. They are, of course, very much less common [1] than they were in the early years of the industrial system, but the small business man of today who starts in on a small capital and builds up a business of his own, is the very prototype of the individual who started the industrial revolution by hiring a few hands, furnishing them with the raw materials of their trade and a place in which to work, and who then undertook the disposal of the product. He paid them their wages and met the other expenses of the business, and what was left over was his profit. When as often happened he made great efficiencies by the introduction of machinery or the development of new processes or patents, or when he was peculiarly fortunate in the market, he made very large profits and was able perhaps to build up a very considerable business and become what we call sometimes a great entrepreneur. This type of individual developed into the single industrial autocrat so common in the nineteenth century. Many of our prominent business concerns have been built up by this kind of individual. He is still not unknown, even in our

The name Studebaker once stood for a local carriage and wagon works operated by an entrepreneur. (Courtesy Studebaker Corporation of America.)

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[1] That is to say they carry on a very much smaller proportion of our economic activity. There may even be more of them in an absolute sense, rather than less. But relatively they are less important.

highly socialized system. He is the person who borrows some capital, paying interest for it, buys or rents his site, and builds his plant, buys and installs machinery, hires labor, purchases raw materials, supervises the productive operations of the plant, and sells the product. This sort of productive unit, run by one man, may reach an indefinitely large size and may become very complex, with all of its subdivisions ruled from the top. The career of such a man is often very romantic and intensely interesting,[2] but he belongs to the past. Indeed, the very business which he himself has built up tends to adopt the corporate form when its autocrat dies or when its complexity grows too great for a single individual to manage, no matter how great his personal genius may be. The corporation has for this reason become the typical modern form of industrial organization. As a matter of fact, it produces very nearly ninety per cent of all the goods produced—in the United States at least. And for this reason it deserves a very much more extended consideration from one who is trying to understand the problems of industry than do the individual business men who were the typical personalities of an older way of industrial life.

2. *The Partnership and the Corporation*

It is usually true, then, under modern conditions, that the smaller units of business tend to coalesce and that the great industrial autocrats tend to lose their power, in time, to the corporate form of organization or, as it is called in England, the Limited Company. There is unquestionably this tendency, at least for the larger units of business organization, to admit more than one individual to a share in the ownership and management. There have been in the course of time a number of different devices for obtaining this joint ownership. Prominent among them have been the joint-stock company, the partnership, and the corporation. The joint-stock company has nearly disappeared. The partnership has proved itself adaptable to certain restricted areas of business, such, for instance, as the joint practice of a profession. Law firms are often partnerships and physicians often merge their efforts by this device. But it has gradually lost ground to

The name Studebaker now stands for a corporate organization which controls an automobile business with a number of large plants and world-wide distribution. (Courtesy Studebaker Corporation of America.)

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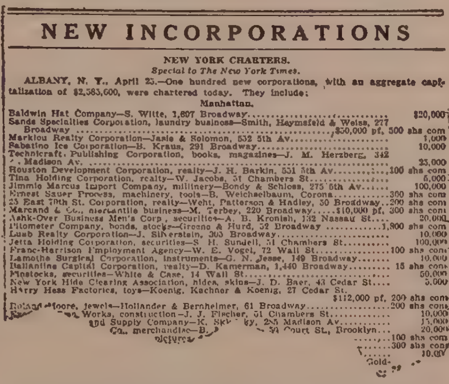
[2] See for instance, the *Life of Robert Owen*, by himself, Garet Garrett's *The Driver*, and Theodore Dreiser's *The Genius*.

the corporate form, particularly in the larger fields of manufacturing and of generally more complicated business affairs. There are a number of reasons for this, but perhaps the most important is that the partnership does not provide, as does the corporation, for a limitation of the liability of its owners. There are other reasons, of course, such as the fact that a partnership becomes unwieldy when there are more than a very few individuals concerned. The partnership also is not, like the corporation, self-perpetuating and interminable except at the discretion of its owners. The partnership automatically terminates with the death of one of the partners, and this is not true of the corporation.

For these reasons as well as for others into which we have not gone, the corporation has gradually become the dominant form of business organization in our industrial system and therefore warrants a somewhat careful examination both on its structural and on its functional sides. The first thing to be said, perhaps, is that, under our law, a corporation has a legal personality; that is, it is able to sue and to be sued, to inherit and to carry on business; in fact, to do any of the things an individual may do, in spite of the fact that it itself is, of course, a depersonalized institution. Closely related to this feature of corporate organization, is the limitation already mentioned of the liability incurred by a person who buys a share of ownership in it. We have already said that a partner is liable for the debts of any of the other members of the partnership. This is not true of the owner of a share of a corporate business, although he too is really a partner in it. He is usually liable only to the extent of his actual investment in the business; that is to say, his legal personality is quite separate and distinct from that of the business with which he is identified. He can lose what he has put into the business but, provided the stock has been fully paid for, he cannot lose any more. No inefficiency or failure on the part of the management of the corporation, and no contraction of debts by it, can involve a stockholder for more than his original investment.



NEW INCORPORATIONS

NEW YORK CHARTERS.

Special to The New York Times.

ALBANY, N. Y., April 25.—One hundred new corporations, with an aggregate capitalization of $2,583,600, were chartered today. They include:

Manhattan.

Baldwin Hat Company—S. Witte, 1,607 Broadway	$20,000
Sands Specialties Corporation, laundry business—Smith, Haymsfeld & Weiss, 277 Broadway	$30,000 pf, 500 shs com
Marklou Realty Corporation—Jasie & Solomon, 532 5th Av.	1,000
Sabatino Ice Corporation—B. Kraus, 291 Broadway	10,000
Technicraft Publishing Corporation, books, magazines—J. M. Herzberg, 342 Madison Av.	25,000
Houston Development Corporation, realty—J. H. Barkin, 551 5th Av.	100 shs com
Tina Holding Corporation, realty—W. Jacobs, 51 Chambers St.	5,000
Jimmie Marcus Import Company, millinery—Bondy & Schloss, 275 5th Av.	100,000
Ernest Sauer Process, machinery, tools—B. Weichselbaum, Corona	300 shs com
25 East 70th St. Corporation, realty—Weht, Patterson & Hadley, 30 Broadway	200 shs com
Marcand & Co., mercantile business—M. Terbey, 220 Broadway	$10,000 pf, 300 shs com
Ashk-Over Business Men's Corp., securities—A. B. Kronish, 132 Nassau St.	20,000
Pilometer Company, bonds, stocks—Greene & Hurd, 52 Broadway	1,800 shs com
Luab Realty Corporation—J. Silverstein, 303 Broadway	10,000
Jetta Holding Corporation, securities—S. H. Sundell, 51 Chambers St.	100,000
Franc-Harrison Employment Agency—W. E. Vogel, 72 Wall St.	100 shs com
Lamothe Surgical Corporation, instruments—G. N. Jesse, 149 Broadway	10,000
Ballantine Capital Corporation, realty—D. Kamerman, 1,440 Broadway	15 shs com
Finstocks, securities—White & Case, 14 Wall St.	50,000
New York Hide Clearing Association, hides, skins—J. D. Baer, 43 Cedar St.	5,000
Harry Hess Factories, toys—Koenig, Kachner & Koenig, 27 Cedar St.	$112,000 pf, 200 shs com
Roland Moore, jewels—Hollander & Bernheimer, 61 Broadway	200 shs com
Works, construction—J. J. Fischer, 51 Chambers St.	10,000
and Supply Company—K. Sk ky, 285 Madison Av.	15,000
Co., merchandise—B. 34 Court St., Brooklyn	20,000
pictures	100 shs com
	300 shs com
	10,000
Gold-	

Some idea of the importance of the corporation in our industrial life today may be gained by noting the number of "New Incorporations" listed from day to day in our newspapers. (From N. Y. *Times*, April 26, 1929.)

The corporation also has shown itself to be a very superior instrument for performing what is, after all, the fundamental function of the modern form of business organization; that of collecting into one large aggregation small amounts of capital which could not be gathered together by any one of the individuals involved. As business began to be done on a larger scale during the eighteenth and nineteenth centuries, a very advantageous situation was developed for the organization of some form of business structure which could command larger and larger amounts of capital and so operate on a wider scale than was possible for any of the individuals involved. This meant taking advantage of the savings in large-scale production and so, very large profits. And the need for this kind of organization grew with the extension of the scale on which business was done, until, at the present time, the aggregations of capital are more vast than could have been imagined by the business men of another century; and their gathering together can only be accomplished by the complicated financial activities of the promoters and managers of the corporate form. No individual, usually, is equal to it.

3. *The Legal Status of the Corporation*[3]

To understand the legal status of the corporation we must consider some remote prototypes. In the late middle ages we find, in the city charters granted by the Crown, the earliest examples of the corporate form. Later, various religious and charitable organizations were permitted to incorporate. The corporate charter created an artificial entity which could own, hold, and manage the property of such bodies in perpetuity. In all these cases, it is important to note that the charter was conceived of as a special privilege conferred by the Crown to further public or philanthropic objects.

This idea of public service was still current at the time of the incorporation of the great colonial trading companies. Although, in actual fact, these joint-stock enterprises were brought into being by the lure of easy profits, in theory, they were usually regarded as agencies specially created for the purpose of carrying on missionary and colonization work among the heathen. This is seen further in their monopolistic rights and limited liability. The huge profits earned by some of these chartered companies caused many unincorporated joint-stock enterprises to be formed. There followed a wild speculation in the shares of these unchartered companies, bringing ruin to hundreds of investors. As a result, Parliament, in 1718, prohibited unincorporated companies from acting as corporate bodies or selling transferable stock.

Since this Act was never strictly enforced, it was repealed in 1825 and a General Incorporation Act was passed. Under this law the Crown was empowered to grant charters of incorporation without the necessity of a special Act of Parliament. Such charters, however, did not carry the privilege of limited liability until granted by the Act of 1856. This law marked the final step in the transition of the corporate charter from a special privilege granted for public service work to a general privilege open to all. The corporate charter became, in fact, merely a license granted in much the same manner as are automobile or marriage licenses today. In the United States, General Incorporation Acts were passed by most of the states very early in the nineteenth century. Since then a corporate charter has been granted automatically whenever a group of persons (usually a minimum of three) applies in the proper manner and according to the terms specified by the general law.

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[3] For the material in this and the other sections of this chapter which follow the authors are indebted to an article, "The Corporation Today," by John F. Fennelly which appeared in *Readings in Contemporary Problems in the United States*, edited by Horace Taylor and published by the Columbia University Press, 1929.

4. *A Corporation's Charter*

CERTIFICATE OF INCORPORATION

We, the undersigned, in order to form a corporation for the purposes hereinafter set forth, under and pursuant to the provisions of the Act of the Legislature of the State of New Jersey, entitled "An Act Concerning Corporations (Revision of 1896)," and the acts amendatory thereof and supplemental thereto, do hereby certify as follows:

Article I

The name of the corporation is: . . .

Article II

The principal and registered office of the Company is in the. . . . . Building. . . . ., New Jersey, and the name of the agent therein and in charge thereof, and upon whom process against this corporation may be served, is. . . . .

Article III

The objects for which and for each of which the corporation is formed are: [4] . . .

It is the intention that the objects, purposes, and powers specified in the clauses contained in this third paragraph shall, except where otherwise expressed in said paragraph, be nowise limited or restricted by reference to or inference from the terms of any other clause of this or any other paragraph in this charter, but that the objects, purposes, and powers specified in each of the clauses of this paragraph shall be regarded as independent objects, purposes, and powers.

Article IV

The following provisions for the regulation of the business and the conduct of the affairs of the Company are hereby established:

The corporation may use and apply its surplus earnings or accumulated profits authorized by law to be reserved to the purchase or acquisition of property, and to the purchase or acquisition of its own capital stock from time to time, to such extent and in such manner and upon such terms as its Board of Directors shall determine; and neither the property nor the capital stock so purchased and acquired, nor any of its capital stock taken in payment or satisfaction of any debt due to the corporation, shall be regarded as profits for the purposes of declaration or payment of dividends, unless otherwise determined by a majority of the Board of Directors, or a majority of the stockholders.

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[4] This "object clause" varies with the nature of the business. Ordinarily it is comparatively simple, but it may be made very broad and comprehensive, as in the case of the U. S. Steel Corporation, whose object clause appears on pp. 311–12.

The corporation in its by-laws may prescribe the number necessary to constitute a quorum of the Board of Directors, which number may be less than a majority of the whole number.

The Board of Directors shall have power, without the assent or vote of the stockholders, to make, alter, rescind, or amend the by-laws of the corporation, to fix the amount to be reserved as working capital, to authorize and cause to be executed mortgages and liens upon the real and personal property of the corporation; and from time to time to sell, assign, transfer, or otherwise dispose of any or all of the property of the corporation, but no such sale of all the property shall be made except pursuant to the vote of at least two-thirds of the Board of Directors.

The Board of Directors from time to time shall determine whether and to what extent, and at what times and places, and under what conditions and regulations, the accounts and books of the corporation, or any of them, shall be open to the inspection of the stockholders; and no stockholder shall have any right of inspecting any account or book or document of the corporation, except as conferred by statute or authorized by the Board of Directors, or by a resolution of the stockholders.

The Board of Directors shall have power to hold its meetings, to have one or more offices, and to keep the books of the corporation (except the stock and transfer books) outside of the State of New Jersey at such places as may be from time to time designated by them.

Article V

The Company shall be authorized to issue capital stock to the amount of... dollars. The number of shares of which the capital stock shall consist is... shares of the par value of...dollars each. (If preferred stock is desired, insert provisions therefor at this point.)

Article VI

The names and post-office addresses of the incorporators, and the number of shares of stock for which severally and respectively we do hereby subscribe, the aggregate of our said subscriptions being...dollars, which is the amount of capital stock with which the Company will begin business, are as follows:

Names	Post-Office Addresses	No. of Shares

Article VII

The duration of the Company shall be perpetual.

In Witness Whereof, we have hereunto set our hands and seals this...day of... 193 .

(L. S.)
(L. S.)
(L. S.)

5. *The Powers of a Corporation*

An individual may do anything not forbidden by law or public policy. A corporation can do only those things which its charter authorizes it to do. Of course, a charter may be phrased in such broad terms that one would find it hard to imagine an act not so included; but the acts of the directors or officers of a corporation may be challenged by a stockholder or by the public authorities, and in any such dispute the power which it is sought to exercise must be demonstrated to exist expressly or by necessary implication.

The sweeping scope of the modern "objects clause" is illustrated in that of the United States Steel Corporation:

6. *A Charter "Objects Clause"* [5]

III. The objects for which the corporation is formed are:

To manufacture iron, steel, manganese, coke, copper, lumber, and other material, and all or any articles consisting, or partly consisting, of iron, steel, copper, wood, or other materials, and all or any products thereof.

To acquire, own, lease, occupy, use, or develop any lands containing coal or iron, manganese, stone, or other ores, or oil, and any woodlands, or other lands for any purpose of the company.

To mine or otherwise to extract or remove coal, ores, stone, and other minerals, and timber from any lands owned, acquired, leased, or occupied by the company, or from any other lands.

To buy and sell, or otherwise to traffic in iron, steel, manganese, copper, stone, ores, coal, coke, wood, lumber, and other materials, and any of the products thereof, and any articles consisting or partly consisting thereof.

To construct bridges, buildings, machinery, ships, boats, engines, cars, and other equipment, railroads, docks, slips, elevators, waterworks, gas works, and electric works, viaducts, aqueducts, canals, and other water-ways, and other means of transportation, and to sell the same or otherwise to dispose thereof, or to maintain and operate the same except that the company shall not maintain or operate any railroad or canal in the State of New Jersey.

To apply for, obtain, register, purchase, lease, or otherwise to acquire, and to hold, use, own, operate, and introduce, and to sell, assign, or otherwise to dispose of, any trade-marks, trade-names, patents, inventions, improvements, and processes used in connection with or secured under letters patent of the United States, or elsewhere or otherwise, and to use, exercise, develop, grant licenses in respect of, or otherwise to turn to account any such trade-marks, patents, licenses, processes, and the like, or any such property or rights.

To engage in any other manufacturing, mining, construction, or transportation business of any kind or character whatsoever, and to that end to acquire, hold, own, and dispose of any and all property, assets, stocks, bonds, and rights of any and every kind, but not to engage in any business hereunder which shall require the exercise of the right of eminent domain within the State of New Jersey.

To acquire by purchase, subscription, or otherwise, and to hold or to dispose of stocks, bonds, or any other obligations of any corporation formed for, or then or theretofore engaged in or pursuing, any one or more of the kinds of business, purposes, objects, or operations above indicated, or owning or holding any property of any kind herein mentioned, or of any corporation owning or holding the stocks or the obligations of any such corporation.

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[5] From the charter of the United States Steel Corporation.

To hold for investment, or otherwise to use, sell, or dispose of, any stock, bonds, or other obligations of any such other corporation; to aid in any manner any corporation whose stock, bonds, or other obligations are held or in any manner guaranteed by the company, and to do any other acts or things for the preservation, protection, improvement, or enhancement of the value of any such stock, bonds, or other obligations, or to do any acts or things designed for any such purpose; and while owner of any such stock, bonds, or other obligations, to exercise all the rights, powers, and privileges of ownership thereof, and to exercise any and all voting power thereon.

Without in any particular limiting any of the objects and powers of the corporation, it is hereby expressly declared and provided that the corporation shall have power to issue bonds and other obligations in payment for property purchased or acquired by it, or for any other object in or about its business; to mortgage or pledge any stocks, bonds, or other obligations, or any property which may be acquired by it, to secure any bonds or other obligations by it issued or incurred; to guarantee any dividends, or bonds, or contracts, or other obligations; to make and perform contracts of any kind and description and in carrying on its business or for the purpose of attaining or furthering any of its objects, to do any and all other acts and things, and to exercise any and all other powers which a co-partnership or natural person could do and exercise, and which now or hereafter may be authorized by law.

The modern corporation, in the eyes of the law, is an artificial person which has the right to own and hold property, to buy and sell, to make contracts, to sue and be sued in the courts. By an extension of this legal fiction it has been declared entitled to certain of the privileges and immunities guaranteed to natural persons by the Constitution of the United States. Thus, the corporation is treated as a person under the terms of the fifth and fourteenth amendments, which prohibit the Federal and state governments, respectively, from depriving any person of life, liberty, or property, without due process of law.

A corporation created by any state may engage in interstate commerce anywhere in the Union. This is a priceless privilege, and its value is enhanced by the fact that certain states have deliberately relaxed their corporation laws to attract those seeking charters. As with divorces, the states with the easiest rules do the busiest business. This privilege, however, is limited to commerce. A corporation from a sister state has no right to engage in manufacturing, mining, insurance or any occupation other than commerce except on such terms as the visited state may prescribe. A state may, indeed, absolutely exclude the corporations of other states from everything except interstate commerce. But the latter is so all-embracing and expansive a concept that state restrictions are dwindling in significance.

In so far as these special regulations restrict the activities of foreign corporations, the corporate form is a handicap rather than an asset in carrying on a nation-wide business. This situation, however, gives the corporation a real advantage in matters of jurisprudence. Because of its status as a foreigner the corporation, when sued or prosecuted in any state other than its own, may have the case transferred from the state to the Federal courts. As a result, the corporation is always able to claim the protection of the Federal laws and, at the same time is provided with an excellent means of evading and delaying litigation.

The early common-law notion was that a corporation could not be guilty of a crime. As Blackstone put it: "A corporation cannot commit treason or felony, or other crimes in its corporate capacity, though its members may in their individual capacity." The rule today is universally otherwise. If a passenger agent of a railroad should issue a free pass in violation of the Interstate Commerce Act, the corporation, being responsible for the acts of its agents within the scope of their authority, is indictable. The New York Central Railroad was held criminally liable for rebates given to a sugar-manufacturing firm. True, a corporation cannot be jailed; but it can be fined and, under sufficient provocation, its charter can be annulled, putting it to legal death.

There is some doubt as to whether or not a corporation could be guilty of a crime involving a wicked and malicious interest. In New York, for example, it has been held that a corporation could not be guilty of homicide. The Federal courts, on the other hand, have held corporations guilty of manslaughter, conspiracy, criminal libel, and "knowingly depositing" obscene matter in the mail.

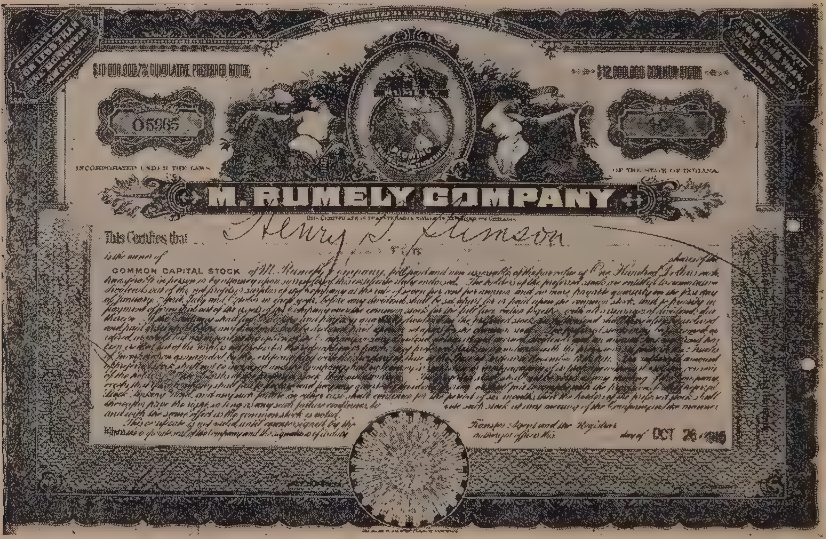
7. *The Financial Structure of the Modern Corporation*

The financial structure of the modern corporation, although similar in kind to that of the early joint-stock company, is vastly more complex in degree. It is impossible here to analyze thoroughly all the numerous kinds of corporate securities that are to be found in the investment markets of the modern world. All we can attempt here is to indicate some of the more important classifications and the reason why such classifications exist.

The simplest fiscal structure is that which was used by the joint-stock companies of the seventeenth century and which is to be found in many small corporations today. In this type there is just one kind of security which represents the entire capital investment. If, for instance, the corporation issues one thousand shares of capital stock, each share of this stock represents ownership of one thousandth part of the entire enterprise, and the right to receive one thousandth part of the annual dividend.

Behind the evolution from this simple type to the highly complex structure of many corporations of today, two main incentives are to be found. The first has been the desire on the part of the corporate promoters to create types of securities that will suit most perfectly the temperaments of the various different groups of investors, and thereby make available larger amounts of capital. The second has been the desire to obtain the vast sums necessary for many modern industrial enterprises, and, at the same time, maintain the control of management within the hands of a small group.

The most fundamental classification of corporate securities is as stocks and bonds. The stockholders are the legal owners of the enterprise and therefore have entire control of management, while the bondholders are merely creditors and have, under ordinary circumstances, no voice in management. Further, being only creditors, there can be no question of liability on their part.


$10,000,000 7% CUMULATIVE PREFERRED STOCK

$12,000,000 COMMON STOCK

05965

INCORPORATED UNDER THE LAWS OF THE STATE OF INDIANA

M. RUMELY COMPANY

This Certifies that Henry S. Stimson

is the owner of

COMMON CAPITAL STOCK of M. Rumely Company, full paid and non assessable, of the par value of One Hundred Dollars each

OCT 26

Bonds are issued to attract capital from those investors who desire to obtain the greatest possible degree of security and, for that end, are willing to accept a relatively small return. Since the bondholder is treated as a creditor, he does not buy a share of ownership but merely lends his capital to the corporation, usually for a definite period of years. The standard, almost universal type of bond today is the mortgage bond. The basic theory of the mortgage bond is that the corporation possesses physical assets as a collateral for borrowing further amounts. Suppose a corporation with assets valued at $1,000,000 desires to float a bond issue of $500,000. It will usually draw up and place in the hands of a trustee a blanket mortgage for the entire amount, against which bonds in denominations of $1,000 or $500 will be issued.

The chief protection of bondholders lies in the priority of their claims against both the assets and the earnings of the corporation. Before any dividends can be paid to stockholders, interest must be paid in full to bondholders. Also, in the event of liquidation, the claims of the bondholders must be paid off in full before there can be any division of assets amongst the stockholders. As long as interest is paid regularly, the bondholders have no voice whatsoever in the management of the concern. In case of a failure to pay interest, however, the bondholders have the right to foreclose on the mortgage and assume entire control. They may then either sell the assets to satisfy their claims or else reorganize the company under a new management. Bonds are usually classified as first, second, or third mortgage bonds in accordance with the priority of their claims against the assets and earnings of the corporation.

BOND SALES ON THE NEW YORK STOCK EXCHANGE

FRIDAY, JANUARY 31, 1930.

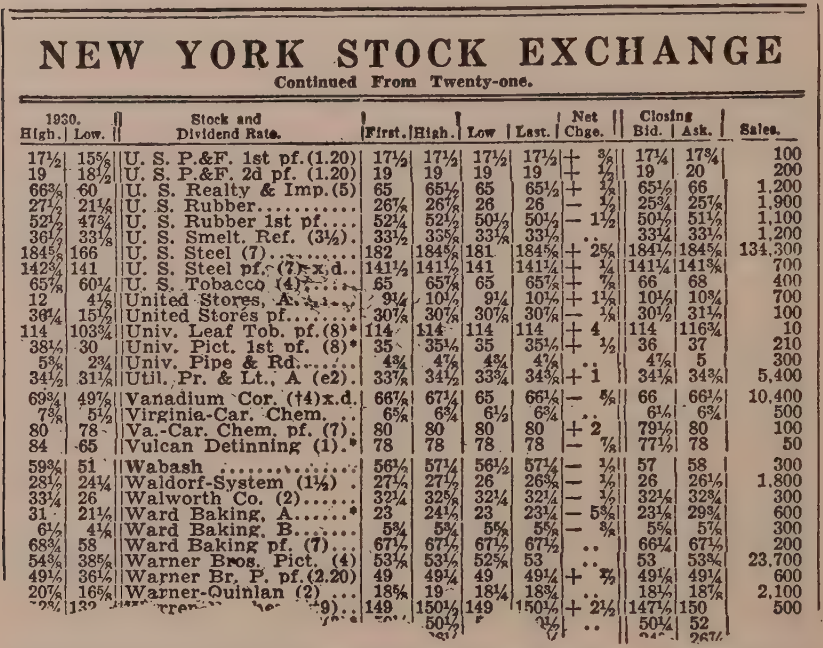
Day's Sales.	U. S. Govt.	Domestic.	Foreign.	Total All.	Year to Date.	U. S. Govt.	Domestic.	Foreign.	Total All.
Yesterday	$522,600	$5,447,000	$2,362,000	$8,331,600	1930	$8,235,200	$139,915,000	$59,549,500	$207,699,700
Thursday	228,000	5,972,000	2,777,000	8,977,000	1929	14,444,500	175,334,700	69,210,500	258,989,700
Year ago.......	646,000	8,058,000	2,562,500	11,266,500	1928	22,996,000	202,276,800	100,070,500	325,343,300
Two years ago.	893,000	7,142,500	4,548,000	12,583,500	1927	28,501,050	281,071,200	139,405,700	448,977,950

(From *N. Y. Times*, February 1, 1930.)

As stated above, the stockholders are the legal owners of the corporation and, as such, possess complete control of management. This right they lose only when the business is unable to meet the claims of its creditors and consequently is foreclosed and expropriated for the benefit of the latter. In the control of management it is an almost universal rule that each share of stock has one vote, and that a bare majority of stock, or votes, holds the power of making all corporate decisions. The chief exception to this rule is found in certain coöperative associations which achieve democracy of management by limiting each stockholder to a single vote regardless of the number of shares of stock that he may own. It is also true, as will be explained presently, that not all types of stock carry the voting privilege.

Practically all of the many varieties of stock found in modern financial practice may be classified either as preferred or common stocks. By preferred stock is meant those types which have prior claims against the earnings and assets of the business; and by common stock, those types that possess the right to all the earnings and assets that remain after all prior claims have been met. Preferred stock may or may not carry the voting privilege, while common stock universally does so. In recent years there has grown up a practice of dividing the common stock into two classes, one of which carries the voting privilege while the other does not. In any case it is usually true today that the control of management is ultimately vested in some group of common stockholders. Often, where the preferred stockholders are given the voting privilege, there is also a provision in the bylaws of the corporation that the preferred stock may be retired by a majority vote of the common stockholders. Under such circumstances, the voting privilege of preferred stockholders is like the veto power of the King of England; a power only so long as it is not exercised.

The standard type of preferred stock today is limited to a fixed rate of dividends, and is also usually cumulative as to dividends. The latter means that no dividends may be paid on common stock until all past dividends due on the preferred stock have been paid. Preferred stockholders, being owners, not creditors, of the business, have, however, no right to take over the control of management in the event of nonpayment of dividends. Under such circumstances, the security of the preferred stockholders lies chiefly in the fact that all arrears in dividends due them must be paid up in full out of future earnings before any dividends may be declared on the common stock.



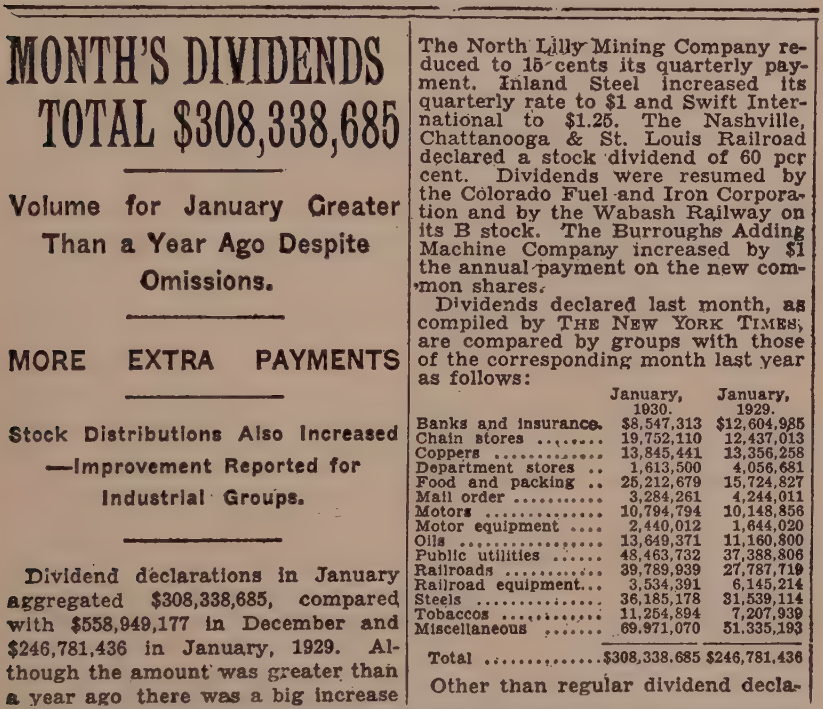
NEW YORK STOCK EXCHANGE

Continued From Twenty-one.

1930. High.	Low.	Stock and Dividend Rate.	First.	High.	Low	Last.	Net Chge.	Closing Bid.	Ask.	Sales.
17½	15⅝	U. S. P.&F. 1st pf.(1.20)	17½	17½	17½	17½	+ ⅜	17¼	17¾	100
19	18½	U. S. P.&F. 2d pf. (1.20)	19	19	19	19	+ ½	19	20	200
66⅜	60	U. S. Realty & Imp.(5)	65	65½	65	65½	+ ⅛	65½	66	1,200
27½	21⅛	U. S. Rubber............	26⅞	26⅞	26	26	– ½	25¾	25⅞	1,900
52½	47¾	U. S. Rubber 1st pf....	52¼	52½	50½	50½	– 1½	50½	51½	1,100
36½	33⅛	U. S. Smelt. Ref. (3½).	33½	33⅝	33⅛	33½	..	33¼	33½	1,200
184⅝	166	U. S. Steel (7)...........	182	184⅝	181	184⅝	+ 2⅝	184½	184⅝	134,300
142¾	141	U. S. Steel pf. (7) x.d..	141½	141½	141	141¼	+ ¼	141¼	141⅜	700
65⅞	60¼	U. S. Tobacco (4).......	65	65⅞	65	65⅞	+ ⅞	66	68	400
12	4⅛	United Stores, A........	9¼	10½	9¼	10½	+ 1⅛	10½	10¾	700
36¼	15½	United Stores pf.........	30⅞	30⅞	30⅞	30⅞	– ⅛	30½	31½	100
114	103¾	Univ. Leaf Tob. pf.(8)*	114	114	114	114	+ 4	114	116¾	10
38½	30	Univ. Pict. 1st pf. (8)*	35	35½	35	35½	+ ½	36	37	210
5⅜	2¾	Univ. Pipe & Rd.........	4¾	4⅞	4¾	4⅞	..	4⅞	5	300
34½	31⅛	Util. Pr. & Lt., A (e2).	33⅞	34½	33¾	34⅜	+ 1	34⅛	34⅜	5,400
69¾	49⅞	Vanadium Cor. (†4)x.d.	66⅞	67¼	65	66⅛	– ⅝	66	66½	10,400
7⅜	5½	Virginia-Car. Chem. ..	6⅝	6¾	6½	6¾	..	6⅛	6¾	500
80	78	Va.-Car. Chem. pf. (7).	80	80	80	80	+ 2	79½	80	100
84	65	Vulcan Detinning (1).*	78	78	78	78	– ⅞	77½	78	50
59⅜	51	Wabash	56½	57¼	56½	57¼	– ½	57	58	300
28½	24¼	Waldorf-System (1½) .	27½	27½	26	26⅜	– ½	26	26½	1,800
33¼	26	Walworth Co. (2).......	32¼	32⅝	32¼	32¼	– ½	32⅛	32¾	300
31	21½	Ward Baking, A.......*	23	24½	23	23¼	– 5⅜	23⅛	29¾	600
6½	4⅛	Ward Baking, B........	5¾	5¾	5⅝	5⅝	– ⅜	5⅝	5⅞	300
68¾	58	Ward Baking pf. (7)...	67½	67½	67½	67½	..	66¼	67½	200
54⅜	38⅝	Warner Bros. Pict. (4)	53⅛	53½	52⅝	53	..	53	53⅜	23,700
49½	36½	Warner Br. P. pf.(2.20)	49	49¼	49	49¼	+ ½	49⅛	49¼	600
20⅞	16⅝	Warner-Quinlan (2) ...	18⅝	19	18¼	18¾	..	18½	18⅞	2,100
[illegible]	132	[illegible] (9)..	149	150½	149	150½	+ 2½	147½	150	500
		[illegible]	[illegible]	50½		[illegible]	..	50¼	52	

This is an excerpt from the daily newspaper list of stock quotations. To the experienced reader, the figures tell their own story; to others it may be said that the first two columns are the current years' highest and lowest prices; the next names the stock; the five following describe a single day's price movements; the next two tell what prices were being offered and asked as trading closed; and the last tells (in hundreds of shares) the volume of sales. In this list there are a number of the kinds of stock we have described: 1st and 2d preferred, ordinary common and common A and B. The figures in parentheses following the name of the stock indicate the current dividend rate. (From *N. Y. Times*, February 1, 1930.)

The dividend rate on preferred stock usually varies from 6 to 8 per cent according to the credit standing of the corporation. This rate normally is slightly higher than the interest rate paid to bondholders, since the latter possess a prior claim both to earnings and to assets. Consequently, preferred stock appeals to that class of investors who desire a higher rate of return than can be obtained from bonds, and yet desire a greater degree of security than can be obtained from common stock. Preferred stock, like bonds, usually represents an actual investment of capital in the corporation. For this reason, it is usually given a fixed par value of, say, $50 to $100 per share, and the dividend rate is fixed so that the stock will sell on the market at or near this par figure.



MONTH'S DIVIDENDS TOTAL $308,338,685

Volume for January Greater Than a Year Ago Despite Omissions.

MORE EXTRA PAYMENTS

Stock Distributions Also Increased —Improvement Reported for Industrial Groups.

Dividend declarations in January aggregated $308,338,685, compared with $558,949,177 in December and $246,781,436 in January, 1929. Although the amount was greater than a year ago there was a big increase

The North Lilly Mining Company reduced to 15 cents its quarterly payment. Inland Steel increased its quarterly rate to $1 and Swift International to $1.25. The Nashville, Chattanooga & St. Louis Railroad declared a stock dividend of 60 per cent. Dividends were resumed by the Colorado Fuel and Iron Corporation and by the Wabash Railway on its B stock. The Burroughs Adding Machine Company increased by $1 the annual payment on the new common shares.

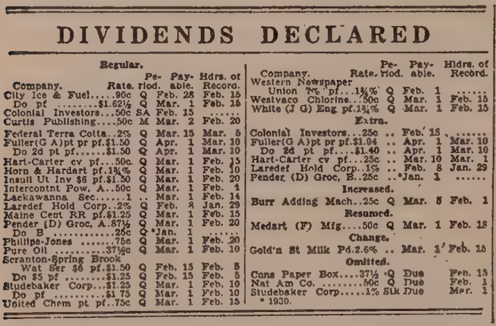
Dividends declared last month, as compiled by THE NEW YORK TIMES, are compared by groups with those of the corresponding month last year as follows:

	January, 1930.	January, 1929.
Banks and insurance.	$8,547,313	$12,604,985
Chain stores	19,752,110	12,437,013
Coppers	13,845,441	13,356,258
Department stores ..	1,613,500	4,056,681
Food and packing ..	25,212,679	15,724,827
Mail order	3,284,261	4,244,011
Motors	10,794,794	10,148,856
Motor equipment	2,440,012	1,644,020
Oils	13,649,371	11,160,800
Public utilities	48,463,732	37,388,806
Railroads	39,789,939	27,787,719
Railroad equipment...	3,534,391	6,145,214
Steels	36,185,178	31,539,114
Tobaccos	11,254,894	7,207,939
Miscellaneous	69,971,070	51,335,193
Total	$308,338,685	$246,781,436

Other than regular dividend decla-

The more important newspapers compile weekly and monthly information concerning such business phenomena as dividends, trends of production, security, prices, etc. The "financial pages" have become much more accurate and informative in recent years. (From *N. Y. Times*, February 1, 1930.)

The common stockholder, being the residual claimant, carries in theory the burden of the greatest risk on the chance of obtaining the largest share of the profits. In so far as the chance of obtaining large profits is concerned, the above statement is true, since the dividends that may be paid to common stockholders are limited only by the earnings of the business. As regards the degree of risk involved, however, the statement is only partly true. It is true where the common stock represents an actual investment of capital in the business. It is not true in those cases, seen most frequently today, where the common stock is given outright as a bonus either to the promoters for their services or else to the purchasers of the preferred stock. When no actual capital investment is made, of course no risk is involved. It has usually been the custom in the past to issue common stock with a theoretical par value, but at present there is a growing practice of issuing common stock with no par value. The latter practice is much to be preferred, since the former often tends to create a fictitious value for the stock in the eyes of the investor. Since there are rarely any assets left to be divided among common stockholders in the event of failure of the business, the market value of common stock depends almost entirely upon the past and prospective earning record of the corporation. There is no necessary relationship, therefore, between a theoretical par value and the actual market value. Such a relationship exists, it is true, when the common stock represents an actual capital investment, but even then it exists only at the moment of investment. As soon as the investment is made, the two values part company, and they only coincide again by accident.



DIVIDENDS DECLARED

Company.	Rate.	Period.	Payable.	Hdrs. of Record.
Regular.				
City Ice & Fuel	90c	Q	Feb. 28	Feb. 15
Do pf	$1.62½	Q	Mar. 1	Feb. 15
Colonial Investors	50c	SA	Feb. 15	......
Curtis Publishing	50c	M	Mar. 2	Feb. 20
Federal Terra Cotta	2%	Q	Mar. 15	Mar. 5
Fuller(G A)pt pr pf.	$1.50	Q	Apr. 1	Mar. 10
Do 2d pt pf	$1.50	Q	Apr. 1	Mar. 10
Hart-Carter cv pf	50c.	Q	Mar. 1	Feb. 15
Horn & Hardart pf.	1¾%	Q	Mar. 1	Feb. 10
Insull Ut Inv $6 pf.	$1.50	Q	Mar. 1	Feb. 20
Intercontnt Pow, A.	50c	Q	Mar. 1	Feb. 4
Lackawanna Sec	1	..	Mar. 1	Feb. 14
Laredef Hold Corp.	2%	Q	Feb. 8	Jan. 29
Maine Cent RR pf.	$1.25	Q	Mar. 1	Feb. 15
Pender (D) Groc, A.	87½	Q	Mar. 1	Feb. 20
Do B	25c	Q	*Jan. 1	......
Phillips-Jones	75c	Q	Mar. 1	Feb. 20
Pure Oil	37½c	Q	Mar. 1	Feb. 10
Scranton-Spring Brook Wat Ser $6 pf.	$1.50	Q	Feb. 15	Feb. 5
Do $5 pf	$1.25	Q	Feb. 15	Feb. 5
Studebaker Corp.	$1.25	Q	Mar. 1	Feb. 10
Do pf	$1 75	Q	Mar. 1	Feb. 10
United Chem pt pf.	75c	Q	Mar. 1	Feb. 15
Western Newspaper Union 7% pf.	1¾%	Q	Feb. 1	......
Westvaco Chlorine	50c	Q	Mar. 1	Feb. 15
White (J G) Eng pf.	1¾%	Q	Mar. 1	Feb. 15
Extra.				
Colonial Investors	25c	..	Feb. 15	......
Fuller(G A)pt pr pf.	$1.04	..	Apr. 1	Mar. 10
Do 2d pt pf	$1.40	..	Apr. 1	Mar. 10
Hart-Carter cv pf	25c	..	Mar. 10	Mar. 1
Laredef Hold Corp.	1%	..	Feb. 8	Jan. 29
Pender (D) Groc, B.	25c	..	*Jan. 1	......
Increased.				
Burr Adding Mach.	25c	Q	Mar. 5	Feb. 1
Resumed.				
Medart (F) Mfg	50c	Q	Mar. 1	Feb. 18
Change.				
Gold'n St Milk Pd.	2.6%	..	Mar. 1	Feb. 15
Omitted.				
Cons Paper Box	37½	Q	Due	Feb. 15
Nat Am Co.	50c	Q	Due	Feb. 1
Studebaker Corp.	1% Stk		Due	Mar. 1

* 1930.

Stockholders can follow the earnings of their own and other securities by reading the daily press. (From *N. Y. Times*, February 1, 1930.)

Although the creditorship status of the bondholder and the ownership status of the stockholder make for a sharp differentiation between the two in legal theory, this distinction tends to become greatly blurred in actual practice. The chief economic difference is merely one of priority of claims against earnings in kind. As we have seen, the bondholders have theoretically a complete protection against loss by holding a mortgage on assets of a value considerably greater than the total amount of the bond issue. There is a vast difference, however, between the value of the same assets when the enterprise fails to earn profits. Fixed assets, such as factories and specialized machinery are difficult to transform to other uses and may shrink in value to only a small fraction of the original cost in case of failure. The bondholders, therefore, are likely to discover that the security is far from adequate to cover their claims. Under such circumstances, the bondholders will probably suffer less if they do not exercise their right to foreclosure, but merely wait and hope for better times. Even when they do foreclose and take over the property, they are much more likely to reorganize the business under a new management than to attempt to realize on the assets. Thus, the real protection of bondholders lies not so much in the fact that they hold a mortgage on the property as it does in the fact that their claims must be fully satisfied before anything can be paid to stockholders. In this sense the difference between bonds and preferred stock is practically the same as the difference between the latter and common stock. It is largely just a matter of priority as to claims.

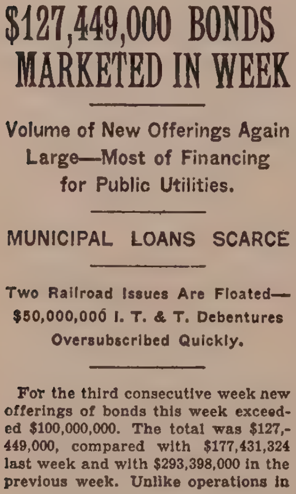
8. *Social Disadvantages of the Corporate Form*

We have seen, above, the extensive benefits and powers obtained by individuals from the use of the corporate form. We must now look at the obverse side of the shield and consider the social disadvantages that arise directly or indirectly as a result of the advantages that accrue to the members of corporations. If the corporation is called the mother of large-scale enterprises, it must also be called the mother of manifold abuses from the viewpoint of society. Of these, the following are perhaps the most important:

1. Fraudulent promotion schemes, stock-watering, etc. Because of its very efficiency as a capital-raising device, the corporation has provided an unusually fertile field for the perpetration of fraud. Investors are induced to exchange their savings for corporate securities by the lure of profits, and the desire to "get rich quick" is one of the strongest of human motives. For this reason the gullible—and who of us is not gullible in some circumstances?—are often more easily influenced by the extravagant promises of the fraudulent promoter than by the conservative prospects of a sound enterprise. This abuse has existed ever since the joint-stock scheme was first created, and, in fact, is less pronounced an evil today than it has been in the past. . . .

Today the methods of the stockjobber are almost identical with those of the seventeenth century. The chief difference lies in the character of the stocks he will offer to the public. Instead of selling shares in a lutestring or a swordblade company, the fraudulent promoter is much more likely to peddle the stock of a nonexistent gold mine or oil well. As long as human avarice exists, such practices are likely to continue and to meet with a certain measure of success. As compared with his ancestors of the seventeenth century, however, the modern investor has certain important advantages in the safe investment of his savings. In the first place, there has grown up during the past fifty years a vast number of conservative investment banking houses which have very largely supplanted the wildcat promoter in the marketing of securities. The modern investment banker handles the distribution of securities purely as a merchandising business. His success, therefore, depends largely upon his ability to hold the confidence of the investing public. At the present time the number of sound investment opportunities is so great, and the facilities for obtaining good investment counsel are so well developed, that there is little excuse for the average investor running the risk of deliberate fraud, provided he is content with a moderate rate of return upon his capital.

It is chiefly in the field of highly speculative investments, such as mining and oil stocks, that the stockjobber still flourishes. Because of the great risk involved, conservative investment bankers are rarely willing to handle such securities until the success of the enterprise is thoroughly established. This leaves the field open to the wildcat promoter for perfectly legitimate speculative undertakings as well as for those which are fraudulent. The spectacular success achieved by the few in such undertakings always provides a strong lure for the small investor who rarely calculates how heavily the cards are stacked against him. Most of the state governments in the United States have attempted to remedy this evil by the passage of so-called "blue-sky laws," which regulate the issue of corporate securities. These laws have met with little success, however, because of the extreme difficulty of drawing a line between what is a legitimate speculative enterprise and what is a case of pure fraud. Greater hope seems to lie in continued efforts to educate the investing public in the principles of sound finance.



$127,449,000 BONDS MARKETED IN WEEK

Volume of New Offerings Again Large—Most of Financing for Public Utilities.

MUNICIPAL LOANS SCARCE

Two Railroad Issues Are Floated—$50,000,000 I. T. & T. Debentures Oversubscribed Quickly.

For the third consecutive week new offerings of bonds this week exceeded $100,000,000. The total was $127,449,000, compared with $177,431,324 last week and with $293,398,000 in the previous week. Unlike operations in

Following a decline in the prices of Stocks, there is usually an increase in the quotation of bonds, reflecting a transfer of funds from the one type of security to the other. Bonds, on the other hand, are neglected when stock prices are rising. (From *N. Y. Times*, February 1, 1930.)

Another evil in this connection that is difficult to eradicate is that of over capitalization, otherwise known as stock-watering. Often it is a case of pure fraud, but by no means always. For instance, a perfectly sound business enterprise may reorganize and sell its securities to the public at a higher figure than the prospective earning power of the concern justifies. This occurs most frequently at the time of a rapidly rising stock market. This problem is particularly difficult to get at because of the fact that the value of stocks depends so largely upon earning prospects, and the materialization or nonmaterialization of these prospects can only be determined by the passage of time. Here again perhaps the only solution lies in education, and in the hope that investment bankers who deal in watered stocks will lose the confidence of the public and thus gradually eliminate themselves from the business.

2. Evasion of responsibility. In our previous discussion of the advantages of the corporate form to those who incorporate, evasion of responsibility was listed as one of the most important. Similarly it must be clear that this advantage to the individual incorporators is a disadvantage from the view-

point of society. The corporation, though a legal person, has itself no standard of morals. For this reason, corporate officials are likely to feel less moral responsibility for actions performed on behalf of the corporation than they would in their capacity as private individuals. Also the corporate form provides a splendid shield behind which individuals may escape the consequences of practices for which they would be held legally responsible if not incorporated.

This evil is particularly glaring today in the case of small-sized business corporations, and non-commercial corporations created by one or two individuals. Large industrial corporations frequently make use of the corporate shield to evade responsibility, but in such cases it is usually a perversion of a device the primary purpose of which is the raising of capital. In the case of small concerns, however, the corporate form may prove a positive disadvantage so far as the straightforward conduct of business is concerned. Such enterprises are not likely to appeal to the investing public for capital. Furthermore, the limited liability privilege will usually injure their credit standing with commercial banks as compared with individual proprietorships and partnerships. Consequently the possibilities of evading responsibility are likely to loom large as an incentive to incorporation. These possibilities include the concealment of assets, evasion of taxes, deception of creditors, and innumerable shady practices. Although it is exceedingly difficult to fix legal responsibility for such actions, the courts in recent years have sometimes adopted the course of "piercing the veil of the corporate entity." Where deliberate intent to use the corporate form as a shield for illegitimate practices can be shown, the court may reach behind the shield and place full responsibility upon the individual or individuals concerned.

In addition to the activities of small business corporations must be listed those of the many non-commercial corporations formed in recent years by wealthy individuals to hold their private fortunes. By the use of the corporate form they are often able successfully to conceal their assets, and to escape from the full burden of income and inheritance taxes.

3. An instrument for promoting monopoly. We have seen above that the corporation has been a wonderfully efficient mechanism for concentrating the control of vast amounts of capital in the hands of a small number of active business leaders. As a result, the corporate form has played a leading rôle in the development of the great industrial monopolies in recent times. This fact we only mention in passing, as we are not in a position dogmatically to term this condition a social evil. Such a conclusion would involve a complete analysis of the respective merits of free competition and monopoly which is clearly beyond our present scope.

4. Separation of ownership and management. Until fifty years ago the characteristic type of business enterprise was the individual proprietorship or the partnership. Under such conditions the owners of a business were

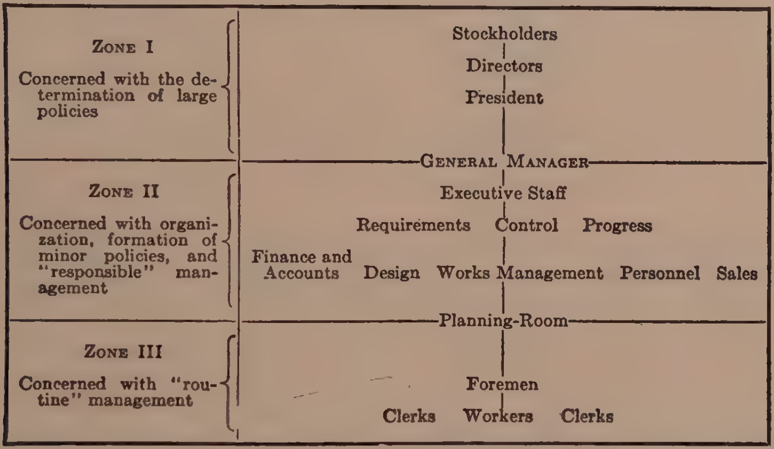
also its managers, and no separation of functions existed. Further, the dealings of the proprietor-managers with employees and customers were likely to be on an intimate, personal basis where moral responsibility to human beings could never entirely be eliminated.

Today this situation survives in small individual proprietorships, partnerships, and close corporations, but it has ceased to be characteristic of modern business enterprise. Instead, in the great industrial corporations which set the general tone of business standards, the function of management has become widely separated from that of ownership. In place of two or three owners who are also the managers of the business, ownership is likely to be divided amongst many thousands of shareholders scattered widely over the face of the globe. The chief concern of these shareholders is the receipt of dividends, and their sole contact with management is through their power to elect the board of directors. As long as earnings and dividends continue ample, the average small shareholder is not likely to be concerned at all with management policies, or even to bother about casting his vote for the election of directors.

The small business-shop of the *entrepreneur*, one of the few places left in our industrial system for the small business man. (Photo Hine.)

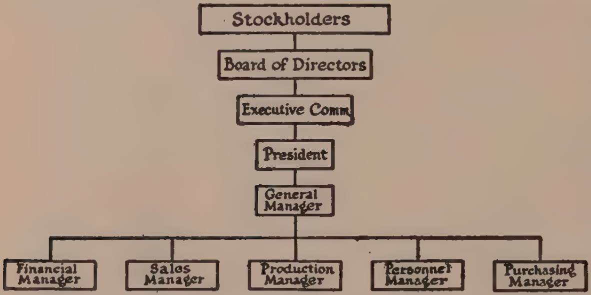
The board of directors supervises the general policies of the enterprise and appoints the leading officials, who conduct the active management. The managers in turn deal with the employees, who may number many thousands, and with the customers, who may number millions. Obviously, therefore, the old personal relationship with employees and customers disappears almost entirely, and the sole contact becomes that of the cash nexus. The foremen who deal directly with the employees, and the salesmen who deal with the consuming public are likely never to have seen the president of the concern, and usually have no idea as to the identity of the owners.

This state of affairs often leads to serious abuses from the viewpoint of society. On the one hand, the pecuniary interests of the directors may not coincide with those of the main body of stockholders. Thus, it has frequently happened that a group of directors are able to reap large fortunes by ruining the enterprise. This may be accomplished by creating other corporations, of which they are the sole owners, and to which they let out contracts at ruinously high prices. Their losses as shareholders of the major enterprise are often insignificant compared with their gains as sole owners of the minor concern. A notorious example of such tactics occurred during the building of the Union Pacific Railway. An inside group of directors created another corporation, known as the Crédit Mobilier, to which they awarded contracts for constructing the line at prices which were certain to ruin the Union Pacific while yielding enormous profits to themselves. In recent years we have seen another notorious example of such tactics in the Continental Trading Company which figured so prominently in the oil scandals of the Harding administration. More frequently, this abuse takes a much less blatant form and may consist merely in the voting by the board of directors of outrageously high salaries to themselves or their friends as officials of the concern. In all such cases the sufferers are the main body of shareholders, who bought their stock in good faith.



A suggested classification of the powers and responsibilities of the persons and groups who are active in a large-scale corporate enterprise. (Courtesy of Person: *Journal of Political Economy*, University of Chicago Press, Vol. XXVIII, No. 2.)

On the other hand, where the interests of directors and shareholders are identical, the very identity of their interests may lead to serious social consequences. As stated previously, the one vital concern of the shareholders is the receipt of large dividends. As long as dividends are forthcoming, shareholders are not likely to concern themselves with the methods by which the profits are obtained. Such an attitude often forces directors and managers to adopt tactics of doubtful morality in order to hold their positions. For instance, the president of an industrial enterprise may be ever so humane in his attitude toward labor, but his success as an executive in the eyes of the directors and shareholders depends solely upon his ability to pay dividends. As a consequence, he is forced to treat his employees and customers merely as instruments to this end, to buy always in the cheapest market and to sell in the dearest, regardless of social consequences. A striking illustration of this situation has been seen recently in the struggle for the control of the Standard Oil Company of Indiana between John D. Rockefeller, Jr., and Colonel Robert Stewart. Mr. Rockefeller attempted to oust Colonel Stewart from the chairmanship of the board of directors because of the latter's unsavory connections with the Sinclair and Doheny oil scandals. Colonel Stewart, however, waged a strenuous but in the end unsuccessful campaign to be retained in office by the shareholders solely on the basis of the large dividends paid during his administration.



A generalized organization chart of a corporate business. The owners (stockholders) of the business delegate the power of control on all but matters of general policy, to a smaller group (board of directors—usually stockholders). An executive committee appointed by the board of directors will, through a president, carry on the organization of the business. The general manager is the "*liaison* officer" between the "inside" group (the several specialist managers) and the "outside" group (owners, directors, etc.).

Viewed in this light, the great industrial corporation appears to be a dividend-grinding machine: a highly efficient instrument for the attainment of that end, but incapable of envisaging social or moral ends. In fact, it is a very close approximation to that bloodless and soulless ideal of the classical economists, "the economic man."

The form, however, has proved itself adaptable to most of the various fields of industry, in which private business operates: to manufacturing, to wholesale and retail trading, to transportation, to banking, in fact to all the different kinds of business in the modern world. In order to get a glimpse of the functioning of the corporation we might consider for illustrative purposes any of these different fields of business; but perhaps we shall make our description more representative if we examine the structure and functioning of a corporate manufacturing enterprise. We shall have to look both at its technical productive and its business sides and at the coördination of its various parts as they operate together. The chapter immediately following will be devoted to this purpose.

CHAPTER 16

THE TECHNIQUE OF CORPORATE PRODUCTION

1. *The Technical Productive Side of a Corporate Manufacturing Business*

Today we are much more apt to think in terms of the financial side of the corporation and of the business office than of the plant. It is our purpose here to remedy this lacuna in the usual analysis and to give some consideration to the technical productive side of the corporation's manufacturing business.

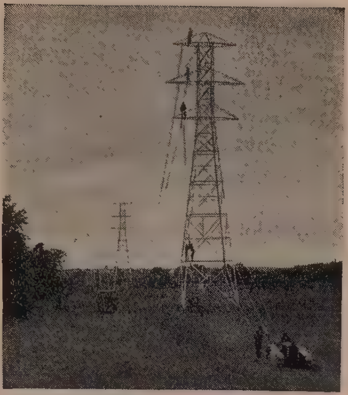
With the growing importance of the corporation and the increase in the complexity of its control, the need of working out certain definite methods of administration and management has become evident. Whether it be the location of a new plant, the organizing of work in the plant, the handling of the "labor problem," or the disposing of the finished product, the industrial engineer, the accountant, the statistician, the personnel manager, and the sales manager are called upon to coöperate toward the end of insuring efficient planning and control.

Where formerly plants were located haphazard or by rule of thumb, there is now a definite tendency toward careful surveying of the many factors which may exert great influence on the ultimate success of the venture. We shall consider these factors first and then develop some other aspects of production technique, especially the planning of the factory itself, methods of establishing and maintaining relationships between managers and workers, and the whole philosophy of "scientific management."

2. *Plant Location*

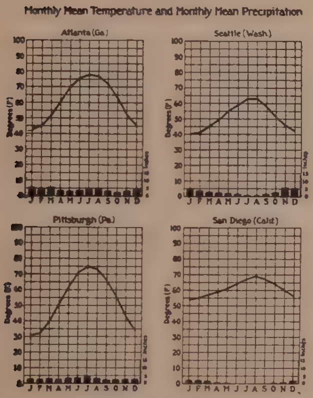
In general these location factors may be listed as: raw materials, power, labor, and the selling market for the product. These will influence different plants in different ways and in varying degrees. It is evident that some industries must of necessity be near their sources of raw material. It would not be efficient to ship the materials necessary for making brick to some distant location in order that the plant might be assured an ample supply of labor, nor would we expect to find salmon canning in Wyoming. Modern science and ingenuity have, however, circumvented many of the limitations imposed by nature. Many eastern canning and preserving companies ship loganberries from the Pacific Northwest for making preserves to supply their trade. These loganberries are packed in barrels with sugar and receive no other preservative treatment until they reach the eastern factory. At one time tanning factories were concentrated around the regions where

Labor

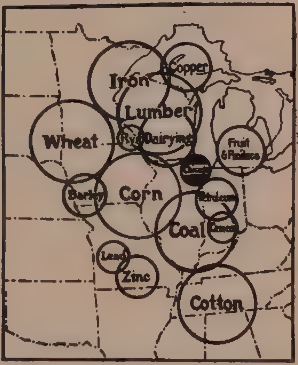


Power

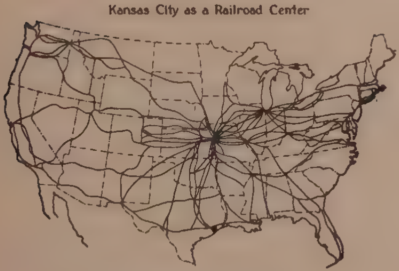
Factors *in* Choosing Factory Plant Sites



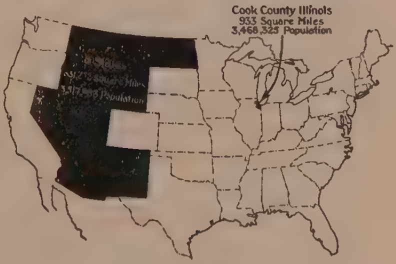
Climate



Raw Materials



Transportation



Markets

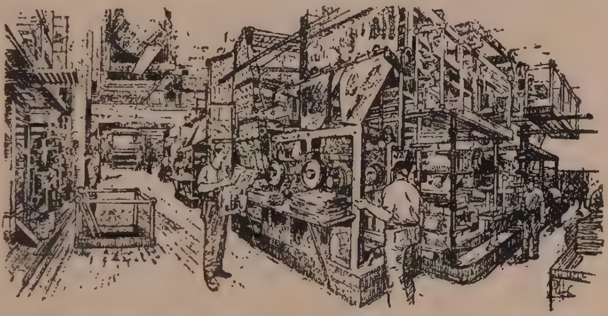
This is a graphic illustration of the factors which must be taken into account in choosing a plant location. It is necessary that climate should be considered in many trades, that raw materials should be readily available, that power lines can be tapped, that transportation facilities are good, that markets are not too distant and that specialized workers should be handy. (Picture upper left—courtesy Ford Motor Company. Picture upper right—courtesy Commonwealth Power Corporation.)

tanbark could be obtained. Now, however, chemistry has extracted the necessary element from the bark and tanning is carried on closer to the areas in which there are many plants using leather in their manufacturing processes.

Power is not now the limiting factor it once was in the manufacturing process. The improved transportation systems are able to supply coal for the production of power in practically any region. Electricity has increased the range of the use of water as a source of energy. Where formerly mills found it necessary to locate along streams where water power could be directly applied to their machines, factories can now be located in a more accessible place and receive the power from the waterfall in the form of electric current. But even with this greater flexibility, factories are in general located in regions of large power resources. The individual power needs of a plant, of course, exert much influence upon its location. Such processes, for example, as the manufacture of certain chemicals and abrasives will in all probability continue to be located near our large power sources just as the manufacture of corundum and calcium carbide is now located at Niagara Falls. This is also true in the manufacture of iron and steel in Pennsylvania, although here the process is perhaps more dependent upon the supply of coal as a fuel for smelting than as a source of power.

Even though there is an increase in the use of machine processes as compared with hand processes, there yet remain enormous demands for human labor; and so, in securing a location for a new factory, the management must be assured of an adequate labor supply. A large plant will perhaps often be able to build up a sufficient labor group in a region where no adequate supply has previously existed. A small plant, on the other hand, would find this impossible, and would probably have to take advantage of some already established labor market, even though there were other disadvantages involved, such as those of insufficient power and raw material. Some concerns have built up labor groups by a long period of intensive education; but in general, the best labor markets are the large cities. Also it is worth noting that these same cities are the best markets for the final articles of production. And it is for this reason that we find many industries flourishing in and about large cities, which, according to the influence of the power and raw material factors, should be elsewhere. Many concerns have found it possible to locate in places where they can utilize the labor of women and children. This is true in such places as mining towns and steel manufacturing centers where the men are employed in the mine or steel mill, but where women and children have no employment. These concerns—such for instance as textile mills or paper-box factories, which depend largely on woman or child labor—are thus able to obtain a cheap supply of labor, especially if there are frequent periods when the men are unemployed and the women and children find it desirable to supplement the income of the main wage-earner of the family.

Getting the products made by it on to the market is in a sense the aim of a manufacturing business, so easy access to the market is an important factor in determining the location of any plant. There are many industries for which this is the all-important consideration. This is true of industries, such as bakeries and confectioneries, which are turning out a product that must reach the consumer in a fresh state or at least very soon after being produced. The daily newspaper plant must be located in the midst of concentrated population areas even though land values and transportation costs of raw materials be high. The newspaper sells news and the market for this product is in the area of concentration. On the whole the market factor is one of the most important considerations that must be figured on in plant location. There are, however, many products which can profitably be transported for further treatment only after being subjected to some intermediate concentration process. This is true in the production of many metals. It would not usually pay to ship the ores of lead or zinc as they come from the mines of the Rocky Mountains, but after a concentration process the concentrates can be shipped to New Jersey for further refining.



A newspaper sells news, which necessitates the maintenance of an extensive plant in a metropolitan area. (Courtesy *N. Y. Times*.)

We find whole industries centered in certain parts of various states. Detroit has become synonymous with automobiles; Grand Rapids, with furniture; Troy, with shirts and collars; Meriden, with silverware; Pittsburgh, with steel and glass; Chicago, with meat products; and Rochester, with cameras. These specialized communities have many advantages, especially if their growth is mostly dependent upon factors other than the momentum of an early start. A trained labor force is apt to be found there. Buyers naturally gravitate to such centers of concentrated production. Also there are to be found there the concerns supplying machinery and repairs to the major industries, as well as concerns supplying minor materials necessary in the productive processes.[1] These specialized communities are apt to have some disadvantages. The disadvantages, however, are more concerned with the welfare of the laborer than with the technical processes of manufacture.[2]

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[1] Even the banks in these sections are specialists in financing the prevailing industry.

[2] These problems are discussed in a later chapter.

The following table or classification of the importance of the several factors of plant location gives a certain definiteness to the problem:

WEIGHING OR WEIGHTING THE IMPORTANCE OF DIFFERENT LOCATION FACTORS FOR INDUSTRY[3]

1. Weight, 1¼; proximity of raw material market, including rail service, water service, and supply.
2. Weight, 1½; proximity to consumer's market, including large cities, rail service, water service, advertising value or influence of plant and competitors.
3. Weight, 2¼; labor market, including character of labor and supply, percentage of unemployed females (women and girls), percentage of unemployed boys (above legal factory age), price of labor, cost of living, specialization of labor, influence of climate and associations or unions.
4. Weight, 1; power, including price and character of fuel (coal, gas, oil), hydroelectric or water power, and central station.
5. Weight, ¼; influence of climate on labor and on product.
6. Weight, ¼; utilization of waste products, including disposal of waste products, market value of waste products, and cost of disposing of same if unmarketable.
7. Weight, ¼; perishability of raw materials, and of finished product.
8. Weight, ¾; freight rates on raw materials and on finished products.
9. Weight, ¼; legislation, regulation, or ordinances, including state legislation (corporation laws, taxes, employers' liability) and municipal, town or country regulations or ordinances (taxes, factory building inspection).
10. Weight, 1; banking facilities, including size of, handling pay rolls, etc., credit, and general utility.
11. Weight, ¾; site of real estate (city, suburb, country) including price of, character of soil, cost of preparing site, foundations, and floods.
12. Weight, ¼; building materials, including local sand, gravel, etc., crushed stone, brick, timber, steel, and cement.

We can now plainly see after the above discussion that, in the main, factory location comes about through the interplay of several factors, and the equilibrium of the forces of power, labor, markets, and raw materials, interacting on each other. This is set forth in the "Wellington Rule," which says:

"The best location for any economic unit is the one which yields the largest difference between capitalized gross income and total capitalized cost." [4]

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[3] Harold V. Coes, "The Rehabilitation of Existing Plants as a Factor in Production Costs," *Engineering Magazine*, June, 1925, pp. 358–59.

[4] "Costs here means not simply the individual or internal costs of an establishment but the entire chain of costs involved in bridging the gap between supplies of raw materials and the consumers of the finished products. Thus the plant should not necessarily be placed where the making costs are lowest but where the sum of the costs for raw materials, transportation of the same to the plant, manufacturing, selling and transportation of the finished product to market will total the smallest possible sum, considering the market to be reached."

3. *Factory Planning*

After the plant location has been decided upon, the next problem is that of planning the factory itself. It is not enough to say that the factory ought to be well constructed and to have ample provisions for light and ventilation. It should be constructed also with a direct purpose of adapting it to the specific processes of manufacturing for which it is to be used. Millions of pounds of factory goods are unnecessarily rehandled in our American factories year after year because of the improper development of plant layout; and the fundamental consideration here should be the study of the necessary operations and their requirements for space, air, and light. Then the design of the plant should be such as to properly house these processes. Proper layout is best achieved, of course, in a newly constructed plant especially adapted to the use to which it is to be put. The old rule-of-thumb method was to start new operations by hiring an old abandoned plant and fitting the new processes into it as best it could be done. Only with great reluctance does an industry begin in this fashion nowadays, unless, indeed, it is a very new kind of manufacturing and sufficient capital cannot be enlisted to enable it to start on an efficient scale in a new plant. Many small and new businesses still start like this, of course, in sheds, or in old plants. But they are handicapped from the start.

The LOCATION FACTORS *Analyzed:*

MARKETS

Domestic
Foreign
Nearness of competition

RAW MATERIAL

Proximity of supply of principal material
Abundance of supply
How laid down
Proximity to feeding industries

TRANSPORTATION

Rail lines available
Navigable watercourses
Street-railway accommodations
Suitability of highways for motor trucks
Terminal rates
Transportation costs in jobbing territory
Rates obtainable

LABOR

Sources of supply
  Men or women
Character of supply
  Native or foreign
  Skilled or unskilled
Current standard of wages
Extent to which supply is unionized
Attitude toward employers, strikes, and so on

POWER

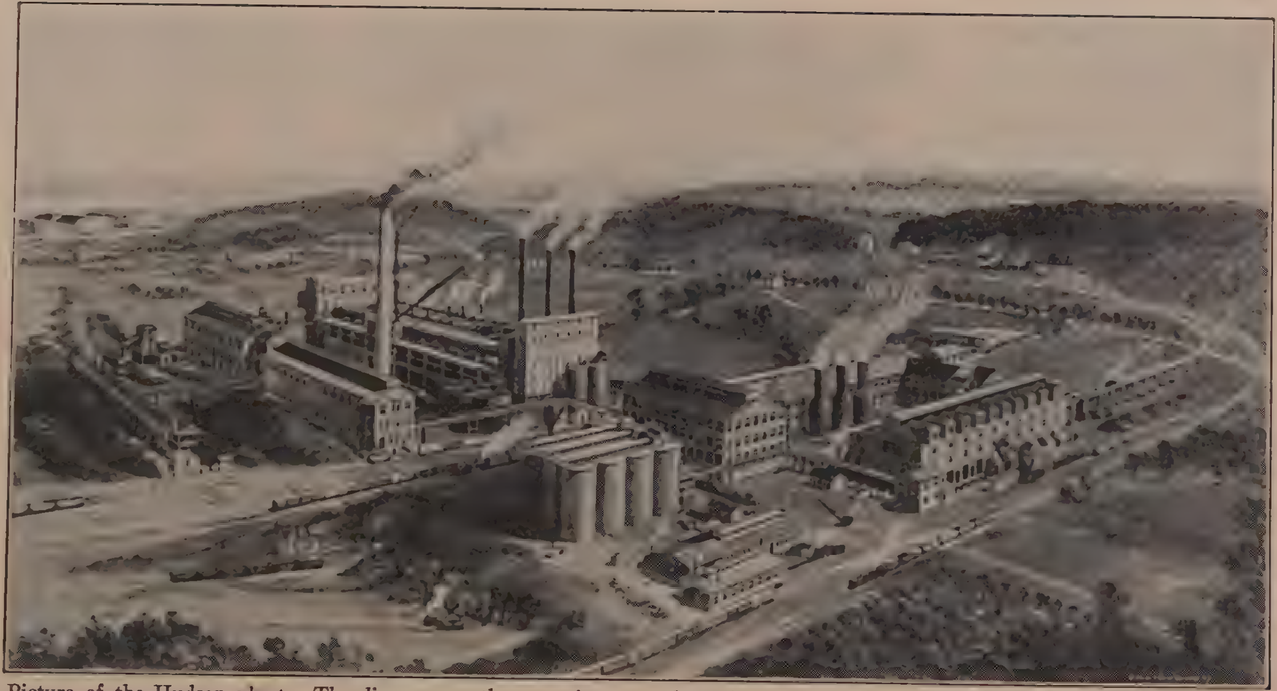
Proximity to supply of coal and oil for fuel
Cost of these laid down at plant
Natural condensing facilities afforded
Possibilities of water-power development
Supply of electric power and cost

CLIMATE

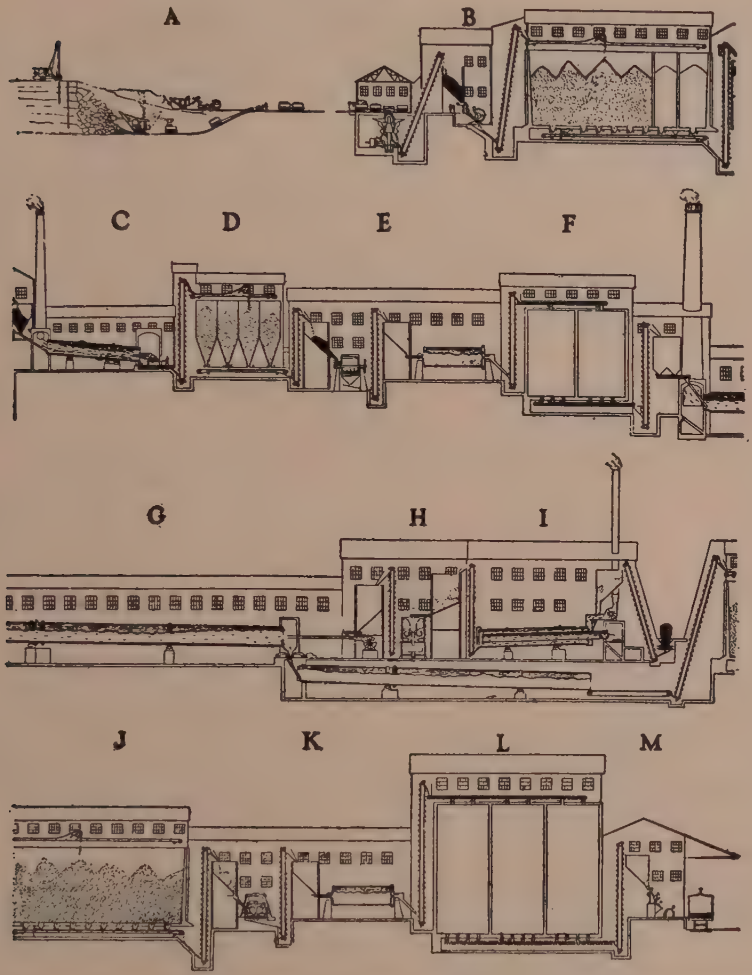
Effect on labor supply
Effect on manufacturing processes
Effect on transportation

(Courtesy of *The Magazine of Business*.)

In earlier times one plant would make printing presses, blow-engines, water turbines, marine engines, mill engines, mining machinery, and in fact, everything for which the firm could obtain a contract. Modern machine shops confine themselves to the building of one or two classes of machinery. If the firm does engage in making more than these limited lines of machinery there will, in all probability, be a special department or shop for each of the different types. One American concern, for instance, builds



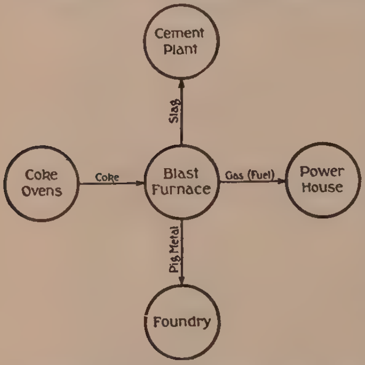
Picture of the Hudson plant. The diagram on the opposite page shows in a general way the course of manufacture—from raw material to bags of cement. (Courtesy Atlas Portland Cement Co.)



The manufacture of cement, one of the best examples of a continuous manufacturing process. (A) Obtaining the raw materials, limestone and shale or clay. (B) The ore is crushed and stored in bins. (C) The crushed materials are removed from the storage bins and after a preliminary mixing, run through the dryer and then to the blending bins (D). (E) The mixture goes through a further process of grinding and pulverizing and into storage bins (F). (G) The mixture is burned in rotary kilns until clinkers are formed. (H) (I) Further grinding and crushing of clinkers. (J) Clinker storage. (K) (L) Final grinding and pulverizing of mixture. (M) Cement placed in bags ready for market. (Courtesy *Concrete*. The original diagram has been changed to fit this text.)

nothing but cranes, another milling machines, another locomotives. The same is true of most industries at the present time. Textile manufacturers limit themselves to the making of ingrain carpets or rugs or lace curtains. Shoe manufacturing is also quite as highly specialized. It is an age of specialization.

When the type of industry and the processes involved are known ahead, the plant structure can best be adapted to their particular needs. The industry may be of the so-called continuous type or may be of the assembling type. In continuous industries the processes necessary for changing raw materials into finished products are carried on within one plant. Some continuous industries may be thought of as synthetic, that is, raw materials are combined to produce a finished product; others may be thought of as analytic, that is, several products are the results of the breaking down of a single raw material. Of the former the manufacturing of cotton cloth, cement, and steel products are typical examples; of the latter the best example is the packing industry, which produces from the cow, the pig, and the sheep everything from the meat on our tables to the buttons on our clothes.



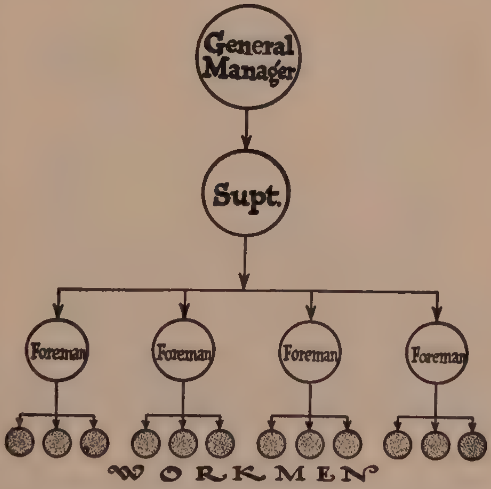
Straight lines, level grades, and synchronized timing are essential principles in factory arrangement. This chart shows very simply the concentration area in steel making and the distribution paths of the product. (Adapted from *Industrial Management*, December, 1922.)

The other type, assembling, is a kind of industry in which the final product is made by first producing the various parts or ingredients and then assembling them. Automobiles, pianos, locomotives, and radio sets are examples of this type of process. Some of the assembling concerns receive the necessary ingredients and assemble them without the intervention of any important intermediary step. Shoe-making, piano-making, and toy manufacturing are examples. But there are many such industries as heavy-tool manufacturing, or the building of locomotives and electrical equipment, which involve many intervening processes or steps such as constructing the molds and the making of castings, or forging, milling, and turning.

The location of machine units in the plant and the proper routing of materials to and from these units is an extremely important part of the layout problem. This process of arrangement of machine units to the best advantage is somewhat too technical for our discussion here. It is sufficient to say that they should be arranged in such a manner that the transportation route of any material in course of construction or assembling should be as short as possible and should also be as nearly as possible on the same plane. The arrangement of machine units will, however, be governed largely by other factors, such as the general location of the plant. That is, if land be cheap and the plant can be constructed on the level, the routing scheme will be very different from that of the plant constructed in a large urban center where floor space is gained by vertical rather than horizontal construction.

4. *Management Organization*

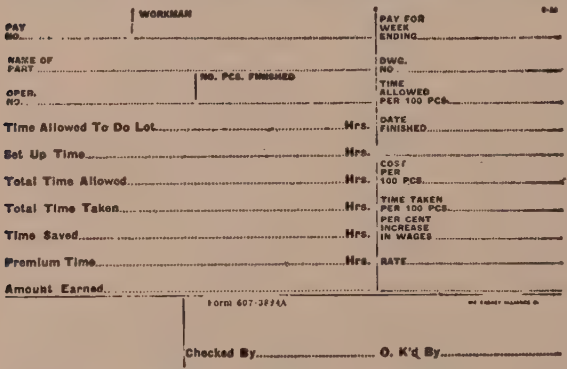
Great advances in the mechanical features of manufacturing which have been described in the preceding chapters have been, to a great extent, paralleled by the advances in administrative methods. With the increase in the size of enterprises, the simple personal relations between the *owner-boss* and the men have been made obsolete and in their places less personal systems of control and management have developed. Under the older and simpler systems of production smaller numbers of men to the plant or shop were the rule. Each man might perform any or all of the operations and might even produce a complete article himself. With the increase in the size of industries, and with the increase in the specialization of tasks and the division of labor, these simple relationships have been replaced by departments to bridge over this lack of personal contact between employer and employee. It is obvious that where large groups of men are concerned there must be some attempt made at discipline if there is to be order and efficiency. This is especially true with a large manufacturing plant where hundreds of men are at work. In order to obtain the best results, varying schemes of management have been evolved. Perhaps the oldest form of definite organization is the "military" or "line" organization, so called because of its similarity to the system used in army control. In this system the lines of direction or authority and instruction are vertical, so to speak. The men are divided into groups in such a manner that each group receives its orders and instructions of all kinds from one man only. Usually a gang boss gives orders and instructs. The above diagram will make the scheme of control more clear.



This diagram represents the military form of business control with authority centering in a general manager and passing from him through a superintendent and foremen to the workers.

This type of organization has, perhaps, in the larger industries, seen its best days. The other important type of organization is the so-called functionalized type.

"Functional organization consists in so dividing the work and management that each man from the assistant superintendent down shall have as few functions as possible." [5] The scheme is really a method of applying the theory of the division of labor to management. The workmen in a machine shop according to this plan are not under one but rather under several foremen. There should be, according to the best authorities on the plan, four shop bosses—gang boss, speed boss, inspector, and repair boss. The gang boss has charge of preparing the work up to the time the piece is set in the machine. The speed boss sees that machine speeds indicated on the card are attained. It is his duty to provide proper tools for workmen on the machine. The inspector is responsible for the quality of the work and both workmen and speed boss must finish the work to suit him. The repair boss sees that each machine is kept in working condition, is clean, free from scratches, and properly oiled. In addition to these four shop foremen or shop overseers, the workmen come into contact with representatives of the routing or planning department whose function it is to relieve the shop foreman of all thought of how the work should be arranged and distributed to the machines. There are four representatives in the planning department who have direct contact with the workmen. These are the order-of-work or routing clerk, the instruction card man, the time and cost clerk, and the shop disciplinarian. The routing clerk writes a day-list instructing the workmen and all shop bosses as to the exact order in which the work is to be done by each class of machine or man. The instruction card man prepares shop orders including standard instruction, lists of materials, standard working times, etc. The cost and time clerk sees that all time and materials used are carefully reported according to the job, workman, and shop so that correct pay roll and other cost records can be made. The shop disciplina-



PAY NO. .... WORKMAN .... PAY FOR WEEK ENDING ....

NAME OF PART .... DWG. NO. ....

OPER. NO. .... NO. PCS. FINISHED .... TIME ALLOWED PER 100 PCS. ....

Time Allowed To Do Lot .... Hrs. DATE FINISHED ....

Set Up Time .... Hrs. ....

Total Time Allowed .... Hrs. COST PER 100 PCS. ....

Total Time Taken .... Hrs. TIME TAKEN PER 100 PCS. ....

Time Saved .... Hrs. PER CENT INCREASE IN WAGES ....

Premium Time .... Hrs. RATE ....

Amount Earned ....

Form 607-3874A

Checked By .... O. K'd By ....

One typical form from a planning department. The vast growth of paper work is a distinguishing characteristic of modern industry. A planning department's activity is almost wholly of the paper work sort. (Courtesy Mac Caskey Register Company.)

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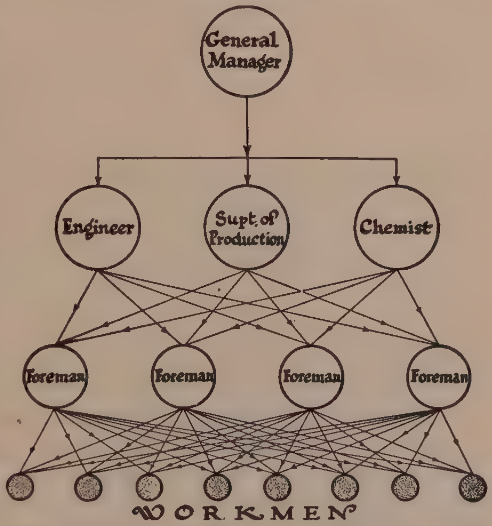
[5] *Transactions of the American Society of Mechanical Engineers*, Vol. 26.

rian keeps the personnel records on which promotions and discharges are based.

The chief advantage of the military or line type of organization is the ease with which discipline can be enforced. Also, the duties and responsibilities of each man are quite clearly defined and there is little room left for misunderstandings. However, this type of organization has some very definite limitations, which are becoming more evident as the size of plants increases. There is a tendency here to load a few men with responsibilities of management far beyond their ability to carry. It is a rare man who is versatile enough both to administer the business side of the organization and to direct the technical side of production. For example, we would hardly expect to find many men in large plants, such as are prevalent in steel manufacturing, who are capable of being both superintendents and chief designers. It is not reasonable to expect to obtain the greatest possible success over any period of time when the whole management rests upon the abilities of a few strong, capable men. It was in general these limitations which led Frederick Taylor to seek forms of management which resulted in the development of functionalization.



This diagram represents the functional form of business control with authority for different functions centering in experts and passing from them through foremen to the workers.

From the foregoing discussion of functionalized management, it should not be hard to appreciate its distinct merits. It is a logical outgrowth of the whole trend toward the greater division of labor. Its best feature is, perhaps, that it conveys expert knowledge to each workman through experts and is not dependent upon a foreman who is only partially educated in several fields. Instead of expecting the foreman to discipline, instruct new men, lay out the work for the day, and see that all the men and machines are functioning properly, these tasks are allocated to several individuals, each specially fitted to direct in his own field. The most obvious limitation of this scheme lies in the field of discipline. Success of plant operation in a strict functional scheme is dependent upon proper coördination of men and departments on the same authoritative levels. Authority assigned to each individual in the military type of organization is quite definite, but in the functionalized type there is apt to be much overlapping and conflict regarding the authority for certain policies.

One might expect after having considered the advantages and limitations of these two types, that some scheme based upon the relative merits of the two would most often be found practical. Such has been the case; and the composite system is known as the "line and staff" form of organization. Skilled specialists head departments which look after particular phases of the business. The necessary flow of authority from top to bottom is preserved; as is also the advice coming from the experts at the heads of the departments. These are the three main types of organization now most in use in this country. It would be difficult, however, to find a big plant organization carried on exactly as these charts show. One would rather find individual modifications and combinations of them, suited to the peculiar conditions and processes of each concern, which is, perhaps, as it should be.

In general, Taylor's investigations followed two main lines, one relating to the machine, the tool, and the material; the other to the workman's methods of handling the machine, the tool, and the material. (Photo Hine.)

5. *Scientific Management*[6]

With the increase in the division of labor and the enlargement of industrial enterprises, there has been, in a large number of cases, a definite decline in the efficiency of the work done. It was in the eighties that Frederick Winslow Taylor, then Chief Engineer for the Midvale Steel Company, appreciating this situation, made definite attempts to find corrective measures for the decline in labor's efficiency. He applied his really great inventive ability to the problem, and after several years of study and experimentation, presented to the world some rather definite conclusions. These formulated principles have come to be known as "The Taylor System" and from it, there has emerged gradually a new and flexible science of management.

It might be characterized as *a form of organization for the purpose of best utilizing the efforts of employers and employees through processes resting upon scientific investigation and analysis.* Developments have been so varied and fruitful that it is rather hard to limit the term *scientific management* at present by any rigid set of definitions. There are, however, some rather definite contributions which it has made towards the great problem of increasing production. The more important ones have been summarized by H. H. Farquhar.[7]

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[6] The student is here referred not only to F. W. Taylor's own books which may be consulted in any library, but also to *Scientific Management in American Industry* (Harper, 1929), a recent symposium edited by H. S. Person and sponsored by the Taylor Society. It is the most complete and modern account of the movement and we recommend that the student consult its pages at this point in his study.

1. The more effective utilization of equipment through the use of carefully kept records and charts of individual machine records.
2. More effective use of labor through scientific man and job analyses.
3. Strict regulation of materials through simplification and standardization and through methods of control of material-activities.
4. More accurate routing including both the physical and the administrative control for work in process.
5. The regulation of industry.

Speaking largely this amounts to furnishing better mechanisms for a more completely centralized control, and for smoother operation. Processes are routed, mapped, and scheduled until management is no longer haphazard, but works with a certain precision toward the attainment of a planned purpose.

In the desire to speed up production, efficiency experts have devised all manner of mechanisms. This picture shows automobile radiators carried on an endless belt. (Courtesy Ford Motor Co.)

The whole movement has encountered some very bitter opposition.

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[7] In the Bulletin of the Taylor Society, February, 1924, Vol. 9, No. 1.

Labor in general, and in particular the American Federation of Labor, has charged, and rightly in many instances, that scientific management is only another scheme to divest the worker of his one remaining advantage, the knowledge of his trade. It is further charged that it is a scheme to speed up the worker in order to increase production without proportionate increases in wages. And it is well enough authenticated that, under the guise of scientific management, many firms maliciously or ignorantly have, in the past, made use of time studies and job analyses for such purposes. Now, as a result of the growing realization of the genuine greatness of scientific management there seems to be a decline in the antagonism of organized labor. Realization is creeping in that increased production can work for the benefit of labor too, if it can be assured that the fruits of this increase will be properly shared.[8] It is not the mechanism of scientific management but its abuse that is to blame for its frequent unfairness to workers. The experiments being carried out in the shops of the Baltimore and Ohio Railroad are an example. Here the workers have agreed to adopt scientific management in the shop provided that they are allowed a share in what benefits may accrue from the increase in efficiency.[9] It might be pointed out here that while scientific management has in the past been very largely associated with the Taylor System itself, it is at present a movement far more comprehensive than was first detailed by its founders. Like many new movements, it has swung back and forth from one extreme to the other but is now settling down to genuine usefulness. We may in the future expect much from it in the way of solutions for the problems of increasing production.[10]

6. *Personnel Administration*

Labor often means, in the minds of employers, more or less a commodity to be bought in the open market, very much as coal and other materials are bought. This has come about in large part from the increase in the size of industrial plants, and the lack of personal contact between owner or manager and the workers. With the growth of these impersonal relations between management and workers, there has been felt the need for some bridge across this growing gulf, whose existence fosters the growth of unrest. Such an instrument was found in specialized personnel management; and many businesses have built up departments of personnel. Just what the Personnel Department is and what its duties are, is indefinite as yet. It varies according to the firm studied. The general divisions of its work are usually: employment, health, safety, education, research, service, adjustment, and joint relations.

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[8] The Atlantic City Declaration of the American Federation of Labor definitely points this way.

[9] No authentic results of the several years' experience of this plan are as yet available. Several critics have, however, already arisen. Whether the operation of the scheme is as good as it looks on paper is yet to be determined. Such experiments, however favorable they may appear, depend to a critical extent on the spirit in which they are carried out.

[10] Indeed, in the sense in which the phrase has latterly come to be used, "scientific management" can almost be defined as "the precise solution of production problems." The range and scope of the movement has tended continually to escape restrictive bounds. Cf. here, again, R. G. Tugwell's *Industry's Coming of Age.*

An employment office of the type which charges a fee for placing men; it is neither a public agency nor one which is connected with employing firms. The replacement of such offices by public ones is a much needed reform. (Photo Hine.)

It is the duty of that part of the Personnel Department intrusted with employment to supply the management with general information concerning the labor market and the source of supply. As a rule, this division has control of wages paid, the hours of work, and other terms of employment. A technique has been built up for the selection of the working force. With the aid of psychological tests of one sort or another, and of personal interviews, applicants for jobs are located in that part of the process where they will best fit. In most cases, careful studies have been made of most of the major occupations in the plant, and the placing expert is aided in his task by having at his disposal accurate analyses of the jobs to be filled.

A trade school in a tractor factory. (Courtesy Holt Tractor Company.)

In many of the older plants the man who did not fit into the particular job at which he found himself was fired. Now he is tried in some other department of the plant. For example, under the old system, when a man who might be large physically came in looking for work, the employment manager would, in all probability, assign him to a task requiring great phsyical strength. Trade tests and interviews, however, often show that such a man is much better fitted to work in some other department not necessarily requiring physical strength. Another important work is to introduce the new worker to his job. Other functions might be illustrated. But as we have already said, the general scope of any such department will depend largely on the plant and the general scheme of its management. Further specific illustration is perhaps then unnecessary. It is easily understood that there might be much of value to be contributed by the personnel experts in the various tasks of looking after the health and safety of the workers, and in the working out of educational schemes for the training of executives, foremen, and even of workers, for particular tasks. There is a constant demand for facts on better administration and better relations. If the organization be large enough this work is often done by a special group devoting itself to problems such as fatigue studies, time and motion studies, trade tests, and in general the problems associating themselves with personal relations and individual and group effectiveness in industry.

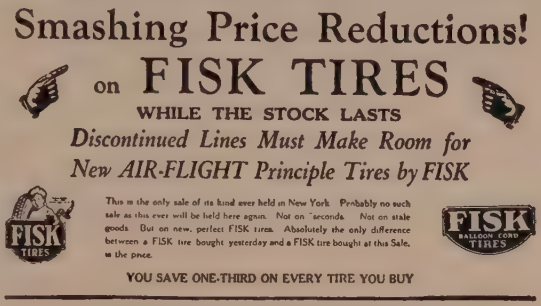
There are, of course, certain fundamental points of relationship between management and employee upon which any Personnel Department must base its program. In general, these have to do with the security of employment, hours, wages, and working conditions. Any scheme which will help build up morale is surely within the jurisdiction of the same group of experts, since the governing principle is that a raised morale has to rest upon understanding and appreciation of the worker as an individual with a personality.

CHAPTER 17

THE TECHNIQUE OF BUSINESS

1. *The Business Side of a Corporate Manufacturing Business*

The student will remember the distinction we made between the technological and the business sides of industry. The technological factors have already received some discussion. It remains to consider briefly the problems we have called, for our purposes here, business problems. These are quite separate and distinct from problems of the operation of the plant. They include, generally, the problems of operating businesses in the price system; for it must be kept in mind always that goods not only have to be produced, but have to meet the demands of a certain market; and further also, that the market is one in which a price has to be met. This consideration is always in the backs of the minds of the managers of business. Regardless of the quality of the goods or the efficiency of the producing organization, there may be difficulties in the market insoluble by any kind of attention executives may give to the producing organization. The pressure of price is an everpresent force in the life of business.


FISK
TIRES
FISK
BALLOON CORD
TIRES

Smashing Price Reductions!

on FISK TIRES

WHILE THE STOCK LASTS

Discontinued Lines Must Make Room for New AIR-FLIGHT Principle Tires by FISK

This is the only sale of its kind ever held in New York. Probably no such sale as this ever will be held here again. Not on "seconds." Not on stale goods. But on new, perfect FISK tires. Absolutely the only difference between a FISK tire bought yesterday and a FISK tire bought at this Sale, is the price.

YOU SAVE ONE-THIRD ON EVERY TIRE YOU BUY

"Price pressure is an everpresent force."

It is usual in a modern firm, because of this, to have quite as great attention paid to this problem as to the technological problems of production. Some one within the firm has to specialize in estimating the probable demand for the product manufactured, with reference, always, to probable competition in supplying it and to the price which may be obtained. This is not so true, of course, if the business possesses a monopoly of the market. For then it has only to arrange its production so as to secure the maximum net returns. It has much more freedom from price pressure because it has no worries concerning possible reductions by its competitors. But there is always the question of potential competition, for it is always thinkable that if prices are kept on a high enough level, there will be found some one who will come into the business and make and sell the goods at a cheaper price.

If the firm has, however, no monoply and must enter into competition, the person who is responsible for the relations of the business to the market not only has to figure out what the general demand is for the product, but has also to estimate that part of the demand which will come to his particular organization. And this, of course, depends to a very large extent upon the price at which the goods can be sold. For if some other firm can sell them cheaper it will get a proportionately larger share of the market. This may have a greater effect than at once appears, because, with our highly developed plants for manufacturing, overhead expenses are very great, and they are very nearly as great whether the product turned out is large or small. Machines and factories depreciate at about the same rate, whether they are used or idle. Consequently a small reduction in the amount of product may mean the difference, in such a business, between success and failure. There is a very great responsibility, therefore, devolving upon the individual of the firm whose business it is to care for these matters.

The loom-room of a Tennessee textile mill. This vast equipment of machines creates a great pressure of overhead costs which can only be met by continual operation. If they must be cared for, and the interest on the investment they represent must be met, while they stand idle, huge losses may be incurred. (Courtesy The Borden Mills Company.)

But this is not the most important part of his problem. Not only has he to keep an eye upon his competitors or upon the possibility of new competitors coming into the market if he sets too high a price; he has also continually to estimate the probable movement of the general level of all prices and the relation to this level of the prices involved in his own specific business planning. For, if the general movement of prices is upward, he cannot afford to have the prices at which he sells his product remain constant. They must go up too, or else the firm's income will be found in time to be less than the necessary outlays. This is a matter of very great importance in a system whose prices change as rapidly as do ours, moving now up and now down, and on the whole being extremely variable.

In spite of these factors of uncertainty, some individual or some group of individuals in the firm is forced to make comprehensive plans extending for some distance into the future. This is, of course, because business operations involve very large and extended movements of masses of raw materials throughout the whole civilized world. From beginning to end they cover also a great range in time. A firm cannot make rubber tires from rubber not yet extracted from trees; and it cannot expect to have rubber from those trees if they have not yet been planted. This necessity for forethought and long-range planning is present in many large industrial establishments. In order to provide for their future needs firms have to make buying contracts a good way ahead and yet they find themselves at the mercy of possible fluctuations in the selling price upon very short notice. In order to sail successfully between this Scylla and Charybdis big businesses are being forced to adopt the most scientific methods for budgetary control and comprehensive planning which their corps of technicians and statisticians can devise. In their attempts to look far ahead they use every statistical device known for the analysis of the market and its likely future trends. And for the probable course of production in the future they call upon their experts for advice as to technical developments. On the basis of these analyses of the probable supplies of and demands for their product they make up a scheme of operation to which they hope to be able to hold at least roughly. In spite, however, of their best efforts, there are many elements of uncertainty and extreme liability to error.[1]

Contrast this typical office of a generation ago with those of today. The increase in the complexity of modern executive control would scarcely have been possible without some considerable change in equipment and arrangement. (Courtesy General Electric Company.)

The executives of the best firms are well enough aware of this and make the greatest efforts to control both the supplies of and the demands for their products. One of the most spectacular of these efforts in recent years has been the development of sales management and particularly, of course, of advertising. One cannot pick up a newspaper or a magazine without becoming aware of the enormous sums expended upon the attempt to control the demand for products. Some witty person has said that modern industry creates its product in one part of its plant and the demand for it in another part, and there is an element of truth in the saying which illuminates the whole problem faced by the modern business executive.

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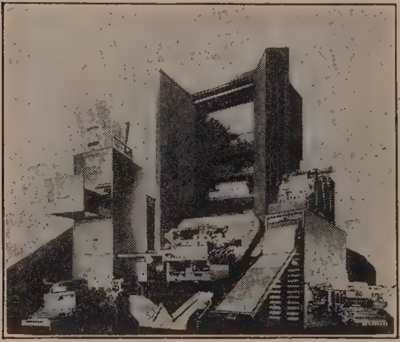
[1] Here, again, there is no way of telling how many firms correspond to this description. Not so many, perhaps, as we like to think. It is undoubtedly true that through sheer inertia or stupidity these recently perfected mechanisms fail to be adopted even in places where they would be expected. It is easy for Americans to think that because we have come a certain way along the road to efficiency we have come all the way. There is no doubt that progress of this sort is notable in America—but this makes our backward areas all the more conspicuous and all the more difficult to defend.

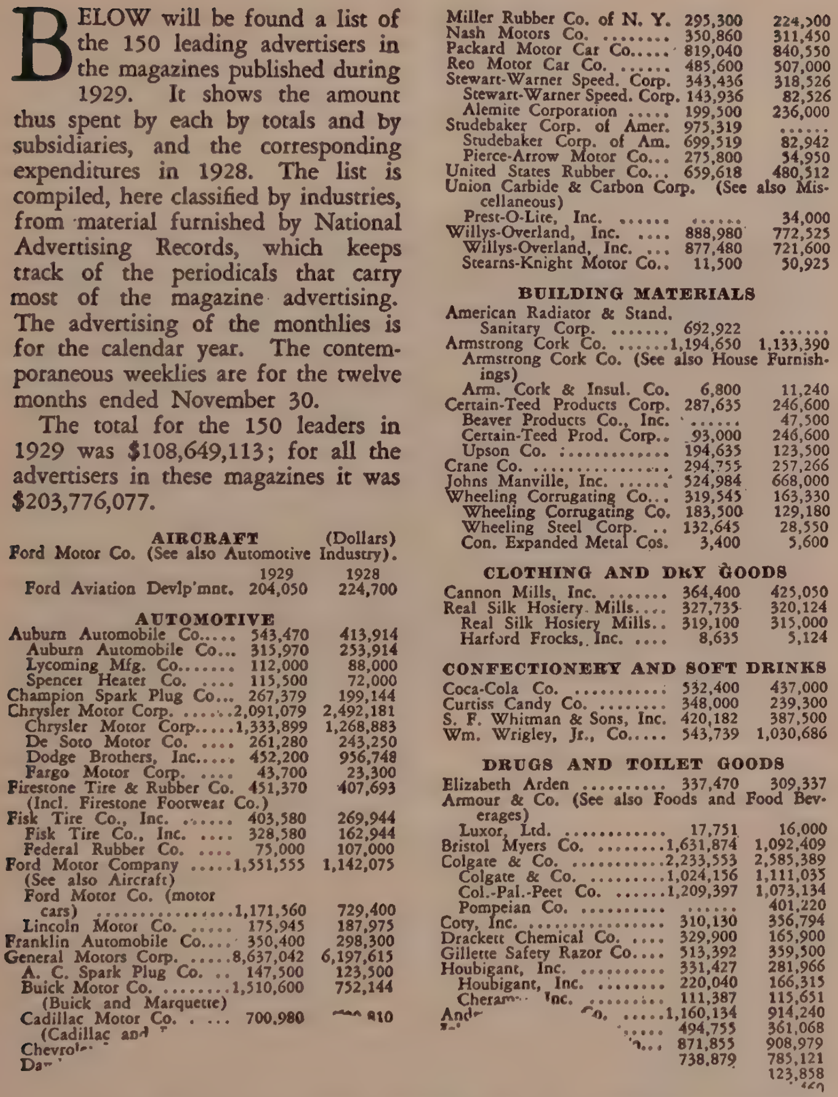
If it were only necessary for him to so manage his plant as to keep the materials going into it in the proper order, to keep the machines running at coördinate speeds, and to turn out the product in the greatest possible quantities, his problem would be sufficiently difficult. But, as we have tried to explain, it is more complicated even than this. He has continually to face these other problems, which may upset his best laid plans for production. And we must again insist, just here, that, although a system which has these irregularities and uncertainties looks more or less crazy to the observer from without, it is the fault of no individual but of the haphazard evolution of the system itself. The individual who enters the business world must take its conditions as he finds them. He cannot escape the issues raised by business considerations any more than he can successfully neglect the technique of production.



Even paper-work is subject to the general rule that repetitive tasks become mechanized. Typewriters, adding and calculating machines, safes and files, recording and multigraphing devices, are becoming as common in office tasks as other machines are in the factory itself. (Courtesy of Remington Rand Business Service, Inc.)

We shall, a little later, go into some of the problems which are raised, such as the devising of adequate means for the forecasting of the possible supplies of the raw materials upon which the manufacturing industry must depend, and those involved in the control and management of the sales department. Both of these have had very extensive development in modern businesses, different of course for different businesses because some are more engaged in selling than in buying and some are more engaged in buying than in selling. The manufacturing business, however, has to pay almost equal attention to both its buying and its selling activities and it will therefore generally be found to maintain separate departments for each of these. The producing department and the sales department, in a chart of the activities of the firm, would have to have almost coördinate treatment and each one of them would be found to have a complex organization built up to carry on the various activities of each.

Not only is the executive, however, faced with the task of organizing technical instruments and of successfully managing its business side; he is also faced with certain problems of the general control and operation of



BELOW will be found a list of the 150 leading advertisers in the magazines published during 1929. It shows the amount thus spent by each by totals and by subsidiaries, and the corresponding expenditures in 1928. The list is compiled, here classified by industries, from material furnished by National Advertising Records, which keeps track of the periodicals that carry most of the magazine advertising. The advertising of the monthlies is for the calendar year. The contemporaneous weeklies are for the twelve months ended November 30.

The total for the 150 leaders in 1929 was $108,649,113; for all the advertisers in these magazines it was $203,776,077.

AIRCRAFT (Dollars)

Ford Motor Co. (See also Automotive Industry).

	1929	1928
Ford Aviation Devlp'mnt.	204,050	224,700

AUTOMOTIVE

	1929	1928
Auburn Automobile Co.	543,470	413,914
Auburn Automobile Co.	315,970	253,914
Lycoming Mfg. Co.	112,000	88,000
Spencer Heater Co.	115,500	72,000
Champion Spark Plug Co.	267,379	199,144
Chrysler Motor Corp.	2,091,079	2,492,181
Chrysler Motor Corp.	1,333,899	1,268,883
De Soto Motor Co.	261,280	243,250
Dodge Brothers, Inc.	452,200	956,748
Fargo Motor Corp.	43,700	23,300
Firestone Tire & Rubber Co. (Incl. Firestone Footwear Co.)	451,370	407,693
Fisk Tire Co., Inc.	403,580	269,944
Fisk Tire Co., Inc.	328,580	162,944
Federal Rubber Co.	75,000	107,000
Ford Motor Company (See also Aircraft)	1,551,555	1,142,075
Ford Motor Co. (motor cars)	1,171,560	729,400
Lincoln Motor Co.	175,945	187,975
Franklin Automobile Co.	350,400	298,300
General Motors Corp.	8,637,042	6,197,615
A. C. Spark Plug Co.	147,500	123,500
Buick Motor Co. (Buick and Marquette)	1,510,600	752,144
Cadillac Motor Co.	700,980	[illegible]
(Cadillac and [illegible]		
Chevro[illegible]		
Da[illegible]		
Miller Rubber Co. of N. Y.	295,300	224,300
Nash Motors Co.	350,860	311,450
Packard Motor Car Co.	819,040	840,550
Reo Motor Car Co.	485,600	507,000
Stewart-Warner Speed. Corp.	343,436	318,526
Stewart-Warner Speed. Corp.	143,936	82,526
Alemite Corporation	199,500	236,000
Studebaker Corp. of Amer.	975,319	......
Studebaker Corp. of Am.	699,519	82,942
Pierce-Arrow Motor Co.	275,800	54,950
United States Rubber Co.	659,618	480,512
Union Carbide & Carbon Corp. (See also Miscellaneous)		
Prest-O-Lite, Inc.	......	34,000
Willys-Overland, Inc.	888,980	772,525
Willys-Overland, Inc.	877,480	721,600
Stearns-Knight Motor Co.	11,500	50,925

BUILDING MATERIALS

	1929	1928
American Radiator & Stand. Sanitary Corp.	692,922	......
Armstrong Cork Co.	1,194,650	1,133,390
Armstrong Cork Co. (See also House Furnishings)		
Arm. Cork & Insul. Co.	6,800	11,240
Certain-Teed Products Corp.	287,635	246,600
Beaver Products Co., Inc.	......	47,500
Certain-Teed Prod. Corp.	93,000	246,600
Upson Co.	194,635	123,500
Crane Co.	294,755	257,266
Johns Manville, Inc.	524,984	668,000
Wheeling Corrugating Co.	319,545	163,330
Wheeling Corrugating Co.	183,500	129,180
Wheeling Steel Corp.	132,645	28,550
Con. Expanded Metal Cos.	3,400	5,600

CLOTHING AND DRY GOODS

	1929	1928
Cannon Mills, Inc.	364,400	425,050
Real Silk Hosiery Mills.	327,735	320,124
Real Silk Hosiery Mills.	319,100	315,000
Harford Frocks, Inc.	8,635	5,124

CONFECTIONERY AND SOFT DRINKS

	1929	1928
Coca-Cola Co.	532,400	437,000
Curtiss Candy Co.	348,000	239,300
S. F. Whitman & Sons, Inc.	420,182	387,500
Wm. Wrigley, Jr., Co.	543,739	1,030,686

DRUGS AND TOILET GOODS

	1929	1928
Elizabeth Arden	337,470	309,337
Armour & Co. (See also Foods and Food Beverages)		
Luxor, Ltd.	17,751	16,000
Bristol Myers Co.	1,631,874	1,092,409
Colgate & Co.	2,233,553	2,585,389
Colgate & Co.	1,024,156	1,111,035
Col.-Pal.-Peet Co.	1,209,397	1,073,134
Pompeian Co.	......	401,220
Coty, Inc.	310,130	356,794
Drackett Chemical Co.	329,900	165,900
Gillette Safety Razor Co.	513,392	359,500
Houbigant, Inc.	331,427	281,966
Houbigant, Inc.	220,040	166,315
Cheram[illegible] Inc.	111,387	115,651
And[illegible] Co.	1,160,134	914,240
[illegible]	494,755	361,068
[illegible]	871,855	908,979
[illegible]	738,879	785,121
[illegible]		123,858
[illegible]		[illegible]

An excerpt from a list which shows the expenditures of 150 magazine advertisers in 1929 and 1928. Not all of them are here, but enough to convey a notion of the vast sums we devote to commercial persuasion. (From *Sales Management*, January 25, 1930.)

capital in the corporate form. And for the purpose of obtaining a somewhat better understanding of this problem, it will perhaps be necessary to analyze it at some length.

2. *The General Control of Operation and Capital under the Corporate Form*

There are first to be considered the heads of the technical production and business staffs who are responsible to the board of directors of the corporation. These and their difficulties we have already mentioned. But we have not indicated another fact of considerable importance: that somehow the heads of these technical-productive and business staffs have to maintain relationships with the board of directors of the corporation, which represents the stockholders. And needless to say, these relationships are often of a very delicate nature. No general description of the means by which friction is avoided can be at all adequate. To maintain a good understanding between a board of directors which is interested primarily in profits and the executives who are interested mainly in the smooth functioning of the operating division, is no easily settled general problem, for these relationships depend upon the inner variations of organization which differ very greatly from firm to firm. It may be that the head of one of the staffs or of both of them is a large shareholder and is also a director of the business. Where this is true, he is perhaps in a position to dominate the whole policy of the concern; but this is less apt to be true as the business ages and as its shares get out of the hands of the few orginal organizers and become widely scattered.

A night scene on Broadway. One of the forms of modern advertising. Would the municipality of Paris permit such a development? Why not? (Photo Ewing Galloway.)

In time there comes to be a situation in which the shareholders and, consequently, the directors, are quite distinctly separated from those who are responsible for operation. This situation may have rather serious social consequences. It is the problem that Thorstein Veblen has referred to in his *Absentee Ownership*. And it is certainly possible that the divorce of ownership from management may result in serious inefficiencies and much withholding of effort. This might thinkably go so far as to cause a breakdown in the whole industrial system.

Perhaps this whole problem will become somewhat clearer by describing the function of these directors a little more fully. They are elected by the stockholders of the corporation, who are themselves the ultimate owners; and, under the laws of most of our states, must be selected from among the stockholders. Directors are, therefore, usually also part-owners, though they may not be large holders of stock. The directors of a corporation meet rather frequently: usually about once a month or once in two months. They decide upon matters of general policy, such as the extension of operations, the establishment of general financial relationships, the reorganization of the operating executives and the like; but they are, of course, not in a position to know anything about the problems which actually face the executives; and they are dependent upon them for their knowledge of the efficiency with which the business is functioning. The only test they have really is whether or not dividends are able to be paid. Dividends come from the margin by which income exceeds expenditures,[2] and there is unquestionably a tendency for directors to become less and less interested in the details of operation and more and more insistent upon the maintenance of

Meeting of a board of directors: Represented on this board, as on other similar ones, are many different interests: oil, sugar, clothing, 5 and 10 cent stores, investment trusts, bankers, shipping, express, copper producers, automobiles, gas and electricity, broadcasting, department stores, etc. (Courtesy Irving Trust Company.)

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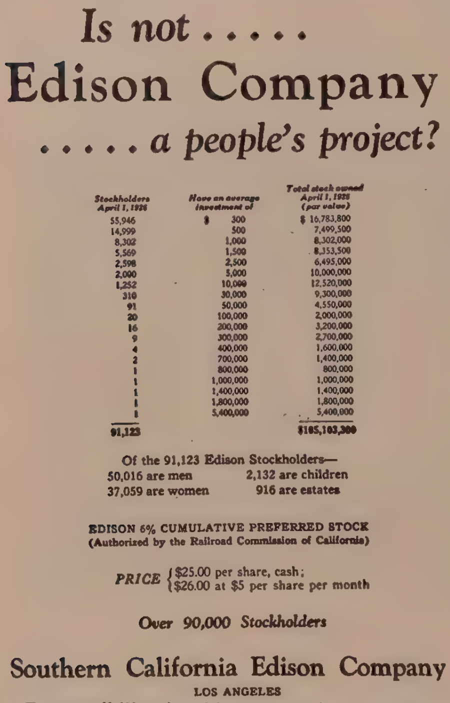
[2] Some income may not be paid as dividends immediately but may be passed to surplus and reinvested in the business. Some may also be held as a "surplus reserve" in the form of cash (bank deposits), other corporations' securities, or loan funds in the money market. To the social difficulties implied by these arrangements we shall refer later on.

dividends. For this reason there may arise a deep difference of opinion between directors and operating officials, the directors asking for dividends at any cost and the operating officials asking for continuous operation and smooth functioning at any cost, even that of the sacrifice of dividends.



Is not . . . . .

Edison Company

. . . . . a people's project?

Stockholders April 1, 1926	*Have an average investment of*	*Total stock owned April 1, 1926 (par value)*
55,946	$ 300	$ 16,783,800
14,999	500	7,499,500
8,302	1,000	8,302,000
5,569	1,500	8,353,500
2,598	2,500	6,495,000
2,000	5,000	10,000,000
1,252	10,000	12,520,000
310	30,000	9,300,000
91	50,000	4,550,000
20	100,000	2,000,000
16	200,000	3,200,000
9	300,000	2,700,000
4	400,000	1,600,000
2	700,000	1,400,000
1	800,000	800,000
1	1,000,000	1,000,000
1	1,400,000	1,400,000
1	1,800,000	1,800,000
1	5,400,000	5,400,000
91,123		**$105,103,300**

Of the 91,123 Edison Stockholders—

50,016 are men **2,132 are children**

37,059 are women **916 are estates**

EDISON 6% CUMULATIVE PREFERRED STOCK
(Authorized by the Railroad Commission of California)

PRICE {$25.00 per share, cash; $26.00 at $5 per share per month

Over 90,000 Stockholders

Southern California Edison Company
LOS ANGELES

Responsibility in this corporation, according to the advertisement, is divided among 91,123 stockholders, over half of whom have an investment of $300. Twenty of the largest stockholders have an investment about equal to that of 55,946 of the smallest stockholders. Ownership, as the advertisement suggests, is vested in many individuals; majority control, however, could be maintained by a few—for voting is attached to shares, not to individuals. (Advertisement in *Forbes Magazine*, May 15, 1926. Courtesy Southern California Edison Company.)

If this lack of interest in the problems of operation is true of directors, it is even more true of stockholders, who, as a rule, meet only once a year for what is known as the annual stockholders' meeting and who there discuss the report of the board of directors for the year. Stockholders are usually ill informed concerning intimate policies, and, it must be admitted, usually very little interested. If directors are concerned largely with dividends, stockholders may be said to be concerned almost solely with their maintenance. This is so true that there has grown up a significant prevalence of proxy voting in stockholders' meetings. By means of these proxies the directors are able to secure a control of policy which is almost absolute and it is by this means that some more active individual in the board of directors may find it possible to establish the policies in which he is, for some reason, particularly interested, and to maintain this control over very long periods of time. This often results in the control of manufacturing corporations, for instance, by financial houses who are interested more in the exploitation of the corporation for their own purposes than in the maintaining of the interests either of the stockholders or of the operating force. There has been a good deal of talk in recent years about the growing power of financiers in our economic system; and here is one of the actual means which are employed for this purpose. It is a fact that on most of the boards of directors of industrial corporations there is a representative of the bank which handles most of the financial relations. By means of the proxy it is relatively easy for this individual to so manage the corporation's affairs as to favor the bank, even at the expense of the corporation itself.

This of course may not be true; but it may be true that some operating official, say the general manager of the business, is also a member of the board of directors and is interested more than any other single individual in the conduct of the firm's affairs. He also may find it desirable to control by the proxy. This is perhaps a more favorable circumstance, because it is well to have the formation of policy in the hands of the actual operating officials; but it often happens that there is a more or less submerged warfare between the financial representative and the representative of the operating officials on the board of directors; and this may lead, in turn, and as a matter of fact often does lead, to confusion and to a hesitating and procrastinating policy on the part of the firm which is disastrous to operating efficiency.

It will be seen that in the very nature of the intricate structure of modern business there are the roots of most pressing social problems which will somehow have to be met in the future. One of these which is grave and which is closely associated with the structure and organization of the business system itself, is the growing demand of the workers for a share in control, for, as might have been expected in a world which is distinguished by the raising of the levels of living, by the growth of political democracy, and by the freeing of the intelligence and abilities of its individuals, people have not remained content with a system of ownership and operation of the industrial system which is essentially autocratic. If, somehow, greater actual control of business operations—with due reservation for the maintenance of necessary discipline and for the protection of equally necessary technical proficiency—should be taken, to a large extent, out of the hands of incompetent absentee owners and turned over to those who actually conduct the processes, to whom operating problems are the most vital things in life, it might be expected that the withholding of effort which is so serious a drawback in industry at the present time, would be obviated and also that the confusion of policy resulting from conflicts between the various interests represented on the board of directors, would be resolved in favor of directing the operation of industry to the two main needs of production, which we have indicated here as first that of securing greater product and second that of making production activities more satisfying and beneficial to those who are engaged in them.

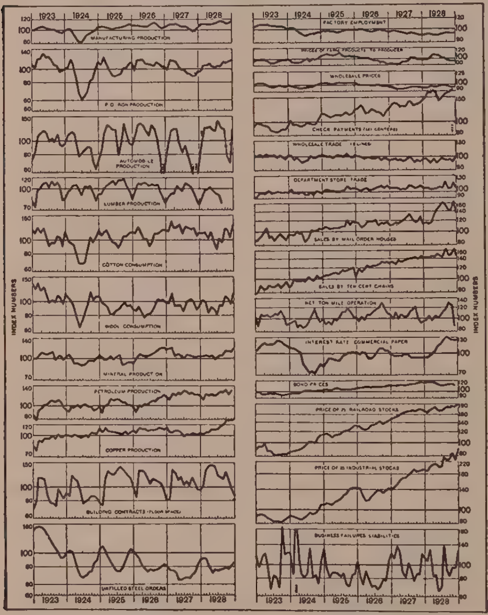
3. *The Technique of Business Forecasting*

The directors of the technical side of corporate manufacturing have been much ahead of those concerned with the business side in utilizing the tools, devices, and methods capable of supplementing their own efforts. The directors of production are constantly utilizing the devices of the laboratory to control and forecast. In the manufacture of Portland cement, samples of the raw materials are regularly taken and analyzed in order that a proper mixture may be maintained. Temperatures in the roasting ovens must constantly be watched if a uniform product is to be produced. This is only one example of how the whole process of manufacturing is dependent upon laboratory control.

There is an awakening to the possibility of control and forecasting as applied to the business side of the manufacturing process. The new business laboratory presents a somewhat different aspect from that of the laboratory of the manufacturing plant; nevertheless, it is a laboratory. In place of test tubes and microscopes, we find machines for eliminating the old hand methods of calculating, many of them electrically driven. Typewriters of various sorts perform a wide range of duties, faster and better than was formerly done by hand. We find the accountant and the statistician instead of the chemist and physicist, investigating, testing, and formulating. Charts and graphs present visually in a more readily accessible form the results of analyses of the accountant and statistician.

MONTHLY BUSINESS INDICATORS, 1923–1928

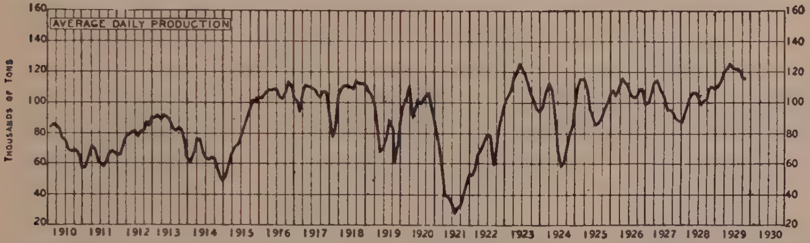
(Ratio charts—see explanations on inside front cover. The curves on check payments, wholesale trade, sales of mail-order houses, and 10-cent chains, and department stores have been adjusted for normal seasonal variations, and manufacturing production for the varying number of working days in the month as well)



The *Survey of Current Business* publishes this series of business indicators monthly. By watching the development of these curves business men can judge the current trend of general economic and business conditions. (From the *Survey of Current Business*, March, 1929.)

The main problem from the viewpoint of the business director is obtaining as large a profit as is possible with the factors at his disposal. This, first of all, necessitates the estimation of the demand for his product. Besides being able to forecast or estimate probable demand he is confronted with the task of buying raw materials at lowest prices and in proper amounts to insure the product to supply the above demand. Whether it be purchasing raw materials, bargaining with labor, determining sales policies, or other phases of control, there is one factor constantly presenting itself, and that is the estimation of the probable movement of price levels.

Adopting the terminology of the statistician, we may say that what the business director needs is a thermometer and a barometer of business conditions. If these be sufficiently accurate and sensitive, it will then be possible to know more of price movements and consequently effect a greater control over all policies touching the profits of the business. The terms themselves suggest their meaning; business thermometers record the present conditions of business; business barometers forecast future movements. Statisticians and economists differ as to the best barometer, but all agree that it must represent the interrelations of the processes of business and industry. For example, pig iron enters either directly or indirectly into almost every product on the market today—either as part of the product or as part of the machinery for making the product. Pig iron should, then, be a crude indicator of business movements. It would surely be a thermometer and in some cases a barometer.



Activity in such basic industries as the production of pig iron is usually felt to indicate coming activity in general business. A chart such as this, kept up to date, has at least some value for any executive who has to plan ahead.

However, as Mr. Jordan suggests in his *Business Forecasting:* "No single barometer can be accepted as definitely indicative of coming events. The 'shadow which is cast before' must be sought in diverse developments rather than through one factor alone." [3]

There are on the market at the present time several barometers which endeavor to indicate to the business man what changes of price levels are likely. As price levels and the business cycle are closely linked, the constructors of these barometers must recognize the importance of the cycle.[4] The Harvard business index, published in the *Review of Economic Statistics*, is one of the several barometers now available.

Besides barometers such as the one just mentioned, and the Brookmire Economic Service, the "Babson Chart" and others, there are such publications as the *Survey of Current Business*, of the United States Department of Commerce, and the *Standard Daily Trade Service*, which aim to furnish the executive with summaries of current business conditions.

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[3] Jordan, D. F., *Business Forecasting.*

[4] We are here anticipating the discussion of the "business cycle" in the next chapter.

CHAPTER 18

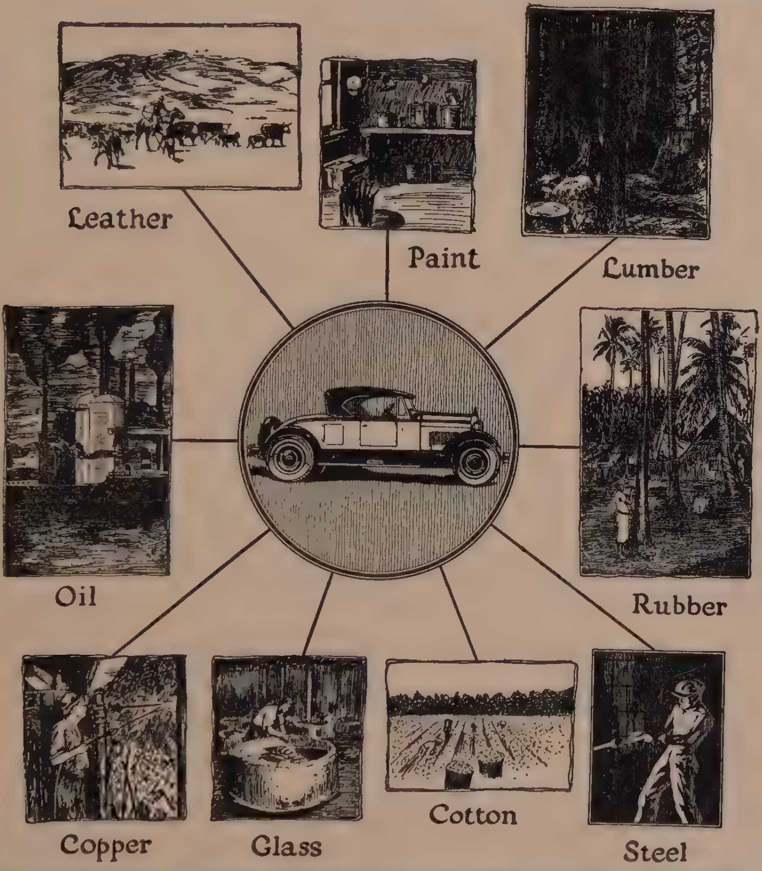
INDUSTRIAL COÖRDINATION AND CONTROL. I

1. *The Coördination of Businesses and Industries*

The coördination of industrial groups is one of the most serious problems presented by the complex relationships in modern industry. Briefly, it is the problem of establishing workable relationships among businesses of the same industry and among different industries. We have already mentioned the need of coördination along with individual specialization in the factory. But businesses have to work out some kind of plan for coördination of their various efforts or discover themselves to be in continual danger of either surplus or shortage, and, consequently, of interrupted operations and failure to supply the goods expected of them. Industries also, as well as the individuals of business, and businesses themselves, must maintain similar workable relationships if they are to function as a part of a system rather than as irresponsible units.

The growers of wool, the makers of yarns, the weavers of cloth, and the makers of clothes cannot escape the relationships they bear to each other. They can, however, fail to maintain these relationships in workable order, and can fail to keep flowing the line of commodities which begins with the growing of wool and ends with the wearing of clothes. Each unit in the sequence is dependent upon the functioning of the units which go before and those which come after; and none can operate without the others. If this relationship could be maintained with some exactness, a great gain might be made in the efficiency of the whole industry.

The problem is again one of those which are made more complicated and difficult of solution by the fact that hardly any industry is a united whole under one ownership and with one management. There are often, though not always in our era of combination, many different and entirely separate firms performing each one of the operations of the industry, from the growing of wool to the final shaping of the cloth into clothes. There is, therefore, not the problem of one great woolgrower supplying one great weaver of cloth, and one great weaver of cloth supplying one great maker of clothes. It is not so simple as that. There are a multitude of growers of wool scattered all over the world. There are fewer but yet very many makers of yarn. There are perhaps still fewer but yet many weavers of cloth. And we know, of course, that there are a large number of firms in the business of making clothes. The fact that these firms are separate makes the problem of coördination one of such a complicated nature as to appear almost insoluble under the present form of industrial organization. The grower of wool may sell his wool to any one of the makers of yarn, and any one of the makers of yarn may sell to any one of the weavers of cloth, and similarly, any one of the weavers of cloth may sell to any one of the makers of clothes.



Many industries and processes contribute to the manufacture of the automobile. This composite picture emphasizes only the major industries which contribute directly to its manufacture. Their proper coördination is one of the gravest problems of the industrial system.

There is no running survey of the amount of wool, the amount of yarns, the amount of cloth, and the amount of clothes; and there is no way of determining how much of the business shall be done by this firm or that firm or another firm. So that, at best, when an industry proceeds on a competitive basis, there exists only a kind of haphazard approximation of coördination, achieved by very crude trial-and-error methods, which often result in shortages and quite as often in surpluses. Of course such a description as this somewhat exaggerates the actual condition of affairs in almost any industry; but it is just because of these dangers of uncontrolled production and sale that so many agencies have been built up for mutual interchange of the information out of which coördination eventually comes. What is necessary to see just here is that without these understandings, which we shall discuss a little later, industry would be simply chaos.

It is only less important that different industries should have some definitely workable relationships established among them. Each industry has not only to maintain some kind of stability within its own structure; it has also to maintain relations with other industries, such, for instance, as the steel industry, for wool cannot become clothes without the assistance of machines which are made of steel. As a matter of fact, it cannot become clothes without the assistance of coal, which creates power, and cotton, from which thread is made, and even many products of other industries, which would at first seem to bear scarcely any relationship to wool, such, for instance, as the oil which furnishes the lubrication without which the machines would grind themselves to bits from friction. There simply has to be some rough way, at least, of beginning the operations which are to merge finally in a finished product after what may be months or even years of preparation. Without some machinery for coördination, industrial life with the mechanisms of the present and with its present complications and interrelationships would be simply unthinkable.

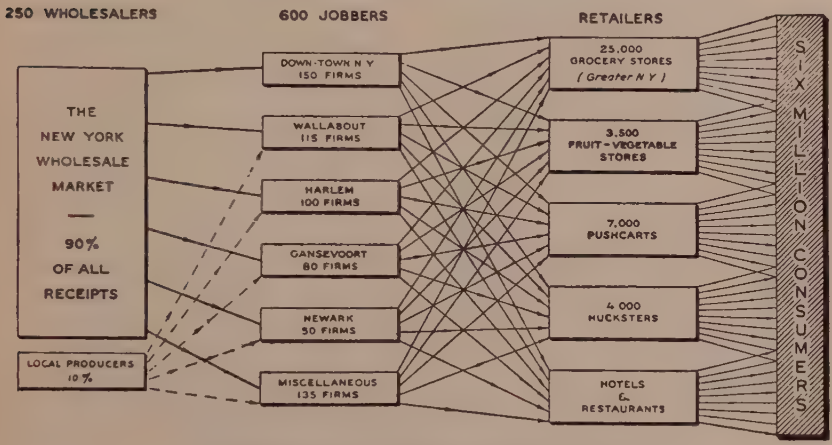
2. *Coördination Accomplished Largely by the Middleman-Marketing System*

The earliest systems of sale were direct. The person who wanted something went to the person who had it and exchanged something which happened, in turn, to be wanted by the other person. This "double coincidence of demand," as it has been called, happened too seldom to make such a system workable when the kinds of goods exchanged in organized markets were increased in number beyond the most primitive necessities of life. The early systems of barter and of direct sale have been superseded gradually by a system of market mechanisms and middlemen which we see are necessary to the operation of our complicated roundabout productive processes and which take the place of the old direct contacts between the producer and the consumer.

In a very real sense of the word, the whole complicated middleman structure, ranging all the way from the single individual who buys and sells, to the great organized markets where goods—or the titles to them—are exchanged, is maintained for the purpose of keeping the makers of goods in touch with the users of them. That is to say, the fundamental function of the whole marketing system is to perform the bargaining activity which was once performed by the contact of mind with mind ensuing upon the meeting of the man who had something to sell with the man who wanted it.

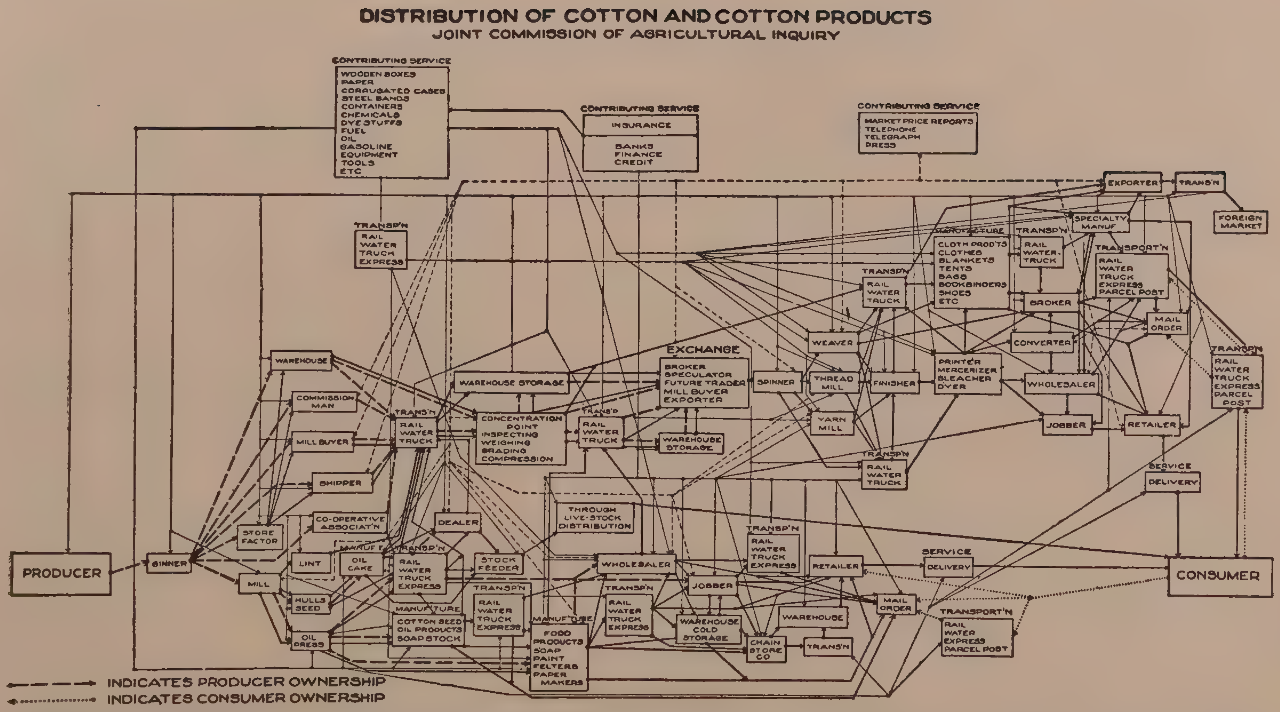
We have always to remember in discussing this middleman-marketing system that the individuals who engage in it work, like anyone else in the business world, for profit. They are specialists in buying and selling. It is their business to buy in a cheap market and to sell in a dear one, and the difference between the cheapness of the one market and the dearness of the other is the margin in which they are interested. A very great part of their activity, therefore, is directed to the anticipation of expected changes in the course of prices. They make it their business to guess what will happen to the prices of specific commodities at some future time and upon the basis of this guess they risk their capital. Where a great many of these individuals who are interested in buying and selling and in anticipating the changes in the price level are gathered together, there comes gradually to be the institution that we know as the organized market. The individuals who buy and sell find it convenient to form some kind of organization and often, even, to locate their activities in some specific place or even to erect an expensive building for the purpose.

HOW THE NEW YORK DISTRICT RECEIVES AND DISTRIBUTES ITS FRESH FRUIT AND VEGETABLE SUPPLY



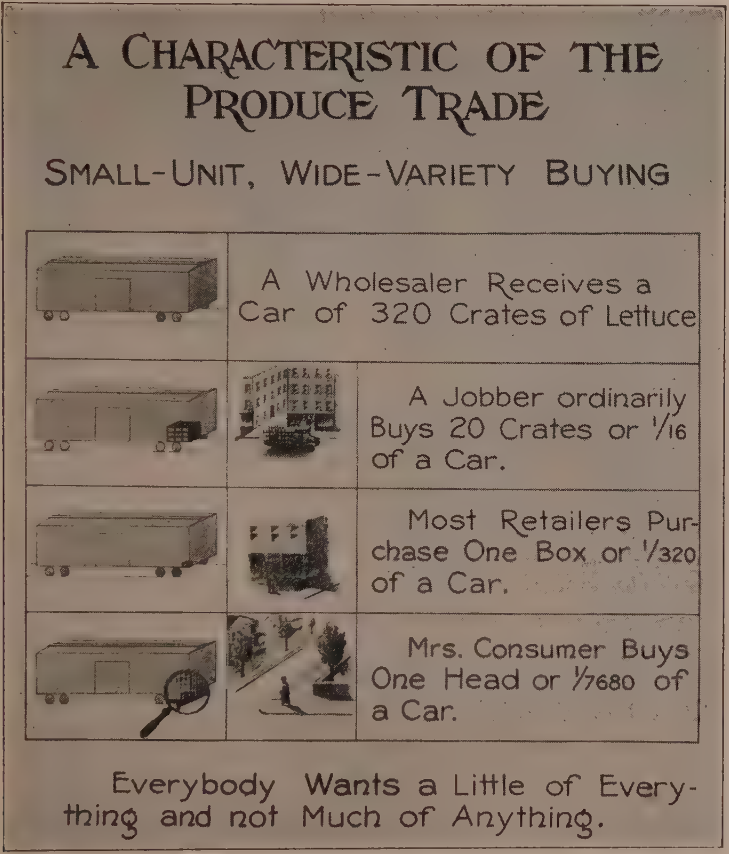
(Adapted from U. S. Dept. of Agr., *Bul. 1411.*)

The important function performed by the middleman is the coördinating function which we have referred to above and, it must be said, it is difficult to see how a system of private business without any centralized control of the movement of goods from one institution of industry to another, and finally from the producer to the consumer, could be maintained without these specialists in coördination who buy in cheap markets and sell in dear



This diagram should make more clear the expression "coördinating function of the middleman." The question arises: is there one middleman, or are there many? How is so complex a system ever to be brought under social control? (From Report of Joint Committee of Agricultural Inquiry, H. R. Report 408, Pt. IV, 1922.)

ones. For buying in a cheap market obviously means buying where goods are not greatly wanted and selling in a dear market just as obviously means selling them where they are more wanted. In reality, therefore, what the middleman does is to initiate the impulse for the movement of goods from places where there are too many of them to places where there are not enough of them.



A CHARACTERISTIC OF THE PRODUCE TRADE

SMALL-UNIT, WIDE-VARIETY BUYING

A Wholesaler Receives a Car of 320 Crates of Lettuce

A Jobber ordinarily Buys 20 Crates or 1/16 of a Car.

Most Retailers Purchase One Box or 1/320 of a Car.

Mrs. Consumer Buys One Head or 1/7680 of a Car.

Everybody Wants a Little of Everything and not Much of Anything.

The function of the middleman in the local situation. (Courtesy N. Y. Port Authority.)

There is, of course, a fundamental difficulty with this theory, and this is that middlemen often find that they can make greater profits by withholding from the market, or, where it is highly organized, by "rigging" it for their own purposes. And this is a curious reversal of the normal function which theoretically they are supposed to perform, for, instead of facilitating the flow of goods from one place to another, they thus obstruct it. Also, on occasion the middlemen, instead of linking the producer and the consumer by the most efficient bonds possible, find it profitable to themselves to obscure the real facts concerning the other to each of the fundamental parties to market transactions, that is to say, the producers and consumers for whom they act as agents.

These difficulties with the middleman-marketing system have brought about a general tendency upon the part of both great consumers and great producers to attempt to eliminate middlemen and to reabsorb their functions into the structure of large unified businesses or ones in which the relationships are maintained by contracts which extend over large areas of space and long reaches of time. The modern large-scale retailers, for instance, such as the department stores, the mail-order houses, and the chain grocery stores, find themselves reaching back toward the manufacturer to insure the supplies of the commodities they purvey; and likewise the manufacturer finds himself reaching out toward the control of the retailing of the goods he manufactures. Both of them find this necessary because of the comparative failure of independent middlemen to perform their functions to the satisfaction of the chief parties concerned. With profit in the forefront of their ambitions middlemen often sacrifice the social service they ought to perform. And this is too costly.

3. *Other Agencies which Assist in Coördination*

The middleman system is not the only mechanism in modern industrial society which assists in the processes of coördination. Great systems of transportation and commerce, such as railways, steamship lines, and airways, would have to be mentioned among these. They contribute toward the linking together of business and business, firm and firm, and even region and region of the earth and so help to reduce the differences in time and space, and to make easier the functioning of the whole industrial world as one system. To a lesser degree telegraph, telephone, and wireless assist in this process.

Also, one would have to mention in this connection banks and other financial houses. For not only do bankers maintain relationships with many different firms, and so form a link between them, but also they perform the function of drawing businesses closer together and making communications easier through their financial mechanisms for the extension of credit and the issuance of money. Also they form a medium for the pooling of savings and for their allocation to the various business firms in need of capital. Especially is this true of the kind of financial houses known as investment houses, which make a business of underwriting issues of stocks or bonds [1] and disposing of them to various banks and individuals who have surpluses of funds to invest.

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[1] To underwrite means to guarantee the sale of a certain issue of "paper"—charging a certain percentage, of course, and usually a high one.

Trade associations, too, which have developed recently would have to be mentioned among the very definite coördinating forces of modern industry. For the trade association has made itself a very powerful factor in the linking of businesses within the field of a single industry. Its activities are as various as the law will permit and sometimes, it must be admitted, extend a good way beyond the spirit of the law. There are upwards of 1,200 of these trade associations of various sizes in the United States alone, which make it a part of their function to frame rules of business conduct, to disseminate the basic facts of the operation of the industry to their members, to study cost and accounting methods, to study the problems of standardization so important to each industry, to maintain bureaus of industrial research, to advise their members concerning relationships with labor and concerning such other generally vexing problems as traffic and transportation, commercial arbitration, the speeding up of distribution, foreign trade, the maintenance of relations with the government, and coöperative advertising.[2] In all of these, it will be seen, the effort is to draw the businesses into closer and closer cohesion. Fundamentally the purpose is to act to-

Make Cranberry Sauce in 10 Minutes!
Eatmor Cranberries
macaroni
The BEST COOKS use Aluminum
Ripe Olives
NATIONAL ELECTRIC LIGHT ASSOCIATION
Help his little hands express his thoughts...
LOUISIANA RED CYPRESS BUREAU
On Luxurious Ocean Liners
EDUCATIONAL BUREAU of PORTABLE TYPEWRITER MANUFACTURERS
LUMBER
CAST IRON PIPE
The PIANO
Photographs
American Gas Association
420 Lexington Avenue, New York City
TEXTILE BAG MANUFACTURERS ASSOCIATION
ASSOCIATED ENVELOPE MAKERS
INDIA TEA
Brass Pipe and Health
Plumbing and Heating Industries Bureau
MAKE A HEALTH EXAMINATION OF YOUR HOME

Stimulation of demand for a common product is one activity of trade associations. Twenty-one such advertisements are represented in this composite.

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[2] Cf. Franklin D. Jones, *Trade Association Activities and the Law* (McGraw-Hill, 1922). The status of trade associations has been made much clearer by a recent Supreme Court decision (1925) confirming the right of members to circulate price and other information among themselves.

gether in the various crises of industrial affairs. The general effect is to make the separately owned businesses of the industry act as if they were all members of a single firm.

There are, however, certain limitations to the effectiveness of the coördinating ability of all of these agencies. Neither the middlemen, the mechanisms of physical communication or of intelligence, the bankers, nor even the trade associations, yield sufficient unanimity of opinion and cohesion in action for the purposes of many modern industries. And the difficulties of securing an entirely efficient coördination under separate management have strengthened the movement toward combination under a single ownership. Combination has been hastened also by the fact that, under modern conditions, savings are usually to be made by producing on a larger and larger scale because costs of production seem generally to be reduced per unit of product as the scale on which business is done grows larger. These two circumstances have brought about the present situation in industry in which many of the more stable industrial functions are carried on by fewer and fewer separate firms. The general tendency seems to be to unify into gigantic corporations, under a single management, the whole of separate industries.

This whole movement has been stimulated by the possibilities there are in the control of price, for if a business cannot only secure the efficiencies to be had by large-scale production and by unified management, but also control the supply of the product it produces so that it can control the price of the product as it wishes, it can enlarge its profits.

During the last half-century these various movements have gone on with increasing rapidity until the situation as we know it today has resulted. The course of combination has not, by any means, always been smooth. Businesses seeking to ally themselves with each other met with the stubborn resistance of people who did not believe combination to be to the best interest of the nation as a whole. But the driving forces behind the movement for concentration were very great. Gradually they have overcome most of the obstacles put in their way. Various mechanisms were cleverly designed to comply with legislation which was prejudiced in favor of competitive conditions and at the same time to embody the essential requirements for control. Forms of organization called pools, others called holding companies, and yet others called trusts were devised. But one after another they were declared to be illegal by the United States Supreme Court as being "in restraint of trade," a phrase used in the famous Sherman Anti-Trust Act of 1890. We shall not here describe these various mechanisms in any detail.[3] They have all taken on the generic name of "trust" which, although inaccurate, strictly referring to a temporary form of combination long ago declared illegal, has come to have so general a usage that usually when we speak of trusts we simply mean big business.

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[3] A sufficient discussion of them is to be found in Eliot Jones, *The Trust Problem in the United States* (Macmillan, 1921), and H. R. Seager and C. A. Gulick, *Trust and Corporation Problems*, (Harper, 1929).

4. *The Problem of Allowing or Preventing Combination*

This controversy has engendered years and years of discussion, legislation, and legal quarreling. The movement was economic in its intent and in the fundamental drives behind it, but unfortunately, it had to take place in a world whose economic beliefs were based upon nineteenth-century dogmas of *laissez faire*, the main tenets of which were that competition is the life of trade, protecting consumer and producer alike, and that any interference with it is prejudicial to the interests of every member of the community. It follows, of course, from this premise that any tendency toward monopoly is an unwarranted interference with the liberties of individuals and tends toward the establishment of privileges for some to the detriment of the many.

No one was more convinced of this than the statesmen of the late nineteenth century and the early twentieth century, who were less familiar with economic facts than they were with the economic doctrines of half a century previous. The facts they observed in the business world unfortunately tended to bear out their prejudice in favor of competition and against combination, for everywhere they saw that when businesses combined the new strength was used to subdue remaining competitors in a most ruthless fashion; and the abuses of unfair competition became almost as notorious as the dangers to consumers from the prices established by the monopoly. The result was a long period of what has been called "trust-busting," the main legislative landmarks of which have been, (1) the Sherman Anti-Trust Act, (2) the Clayton Act, and (3) the Federal Trade Commission Act.[4] We shall not here discuss in detail the legislative attempts to block the combination movement in industry and to restore competition to its former pervasiveness, though the histories of these activities are in themselves extremely interesting.[5] We must be content with saying that the movement toward combination persisted and embodied itself in one form after another until each had been vetoed by legislation or judicial decision. It is however true that mergers and combinations have proceeded and at an accelerating rate. This is partly because our laws are, by general consent, not wholly enforced or are so slowly enforced as to be ineffective. It must be admitted that although various forms of business organization, such as the pool and the holding company have been time and time again found to be illegal by the Supreme Court, they still persist in many instances, though they might be dissolved if actions should happen to be brought against them. It has been found, in most industries, that the trade association is a very effective adjunct to the great corporation. Most stable industries are of too huge size for a corporation to be formed which includes the whole of the industry's activities within itself, and so it usually is found, in such industries, that the largest of the units have the disposal of only from fifty to seventy per cent, perhaps, of the total product.

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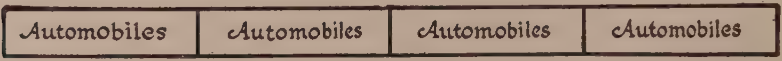
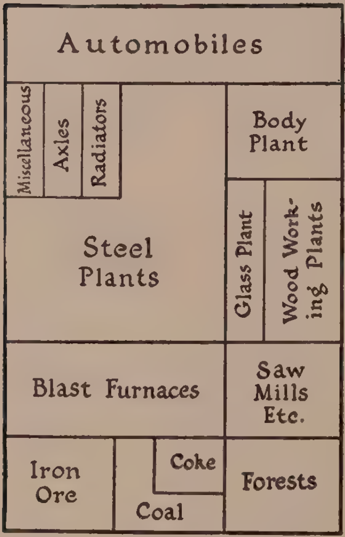
[4] For textual study of these acts there is available a compilation of Anti-Trust Laws, 1890–1923, by Elmer A. Lewis, to be had by applying to the Superintendent of Documents at Washington.

[5] Here again, the student is referred, for more extended study, to *The Trust Problem in the United States*, by Eliot Jones and to Seager and Gulick's *Trust and Corporation Problems*.





The upper chart illustrates the so-called "horizontal" form of organization. In this type a large corporation, such as the General Motors Corporation, controls a number of companies making a similar product. The lower chart, illustrates the "vertical" form of organization. In this type a large corporation such as the Ford Motor Company, carries on most of the essential subsidiary industries. (Adapted from an article in *Industrial Management*, May, 1924.)

Whole industrial plants of very large size may grow up as closely allied to one organized industry as to another; and the decision as to which shall take them over is often a very nice one, not to be settled offhand. Many such questions as this complicate the combination movement and make its analysis difficult.

Sometimes there are recognized two great forms of combination in business, the vertical and the horizontal "trusts," the horizontal trust being one which controls all the firms which operate a certain level of the industry, such as the recent combination of many of the important baking concerns in the country or of many which fabricate a certain kind of steel, or, indeed, make any other product. In contrast to this, the vertical trust is one which extends its control to the subsidiary industries which contribute to the industry. A good illustration of this kind of trust is the Ford Motor Company.[6]

President Wilson's industrial philosophy which he called *The New Freedom* was an anachronistic last attempt to restore competition and to make life easy again for the small business man; but it was not embodied in any effective legislation, although the Clayton Act and the Trade Commission Act were last attempts to stem the tide of combination. *Laissez faire* dies hard because, unfortunately, orthodox economic theories still recognize it and because statesmen are formal-minded and are inclined to lean more heavily on old economic principles than on new economic facts. Practically, though, the persecution of business on account of its legitimate bigness has been pretty much given up because of a growing sense among people everywhere of the obvious necessities for bigness.

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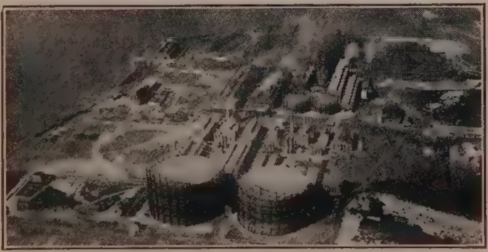
[6] It will be found of interest to read Mr. Ford's own books (written in collaboration with Samuel Crowther) *My Life and My Work*, 1924, and *Today and Tomorrow*, 1926. There is no better way of getting at the American way of organization and development of big business.

As a matter of fact, one who should investigate the conduct of the Department of Commerce under the direction of Secretary Hoover and since would be forced to the conclusion that the activities of that Department, at least, are almost wholly opposed to the spirit, if not the letter, of the Anti-Trust Acts. The Department has been interested in the extension of trade-association activities and all that in general goes with the attempts of business to standardize itself and to bring order from the chaos of nineteenth-century competition. In a sense we have a government without unanimity of opinion or action upon this problem of the direction of industrial energy into certain structural forms. But here again, the question seems to answer itself. For the combination movement goes on.[7]

5. *Government Regulation and Ownership*

The alternative of trying to break up combinations and to restore competition is not necessarily submission to the price regulating force of monopoly, as many publicists assume. There is another alternative which is, of course, to recognize monopoly as inevitable and in the interest of general welfare, but as needing regulation to secure the benefits of its superior efficiencies for the public rather than for the individuals who are concerned in the ownership of the firms involved.


"Gas tanks." The business of distributing gas is a public utility and subject to public regulation for the protection of consumers' interests in a fair price and adequate quality and service. (Courtesy Consolidated Gas Company.)

This regulation does not have to appeal to any new principles in law or in the relationship between government and business, for, as far back as we can go in the history of the relationships of the English government to business, from which of course we get out legal precedents, there have been controls of business in the interests of the consumers of its products. Common carriers, for instance, have always been controlled and likewise other businesses which, in the phrase of the Supreme Court of the United States are "affected with the public interest."

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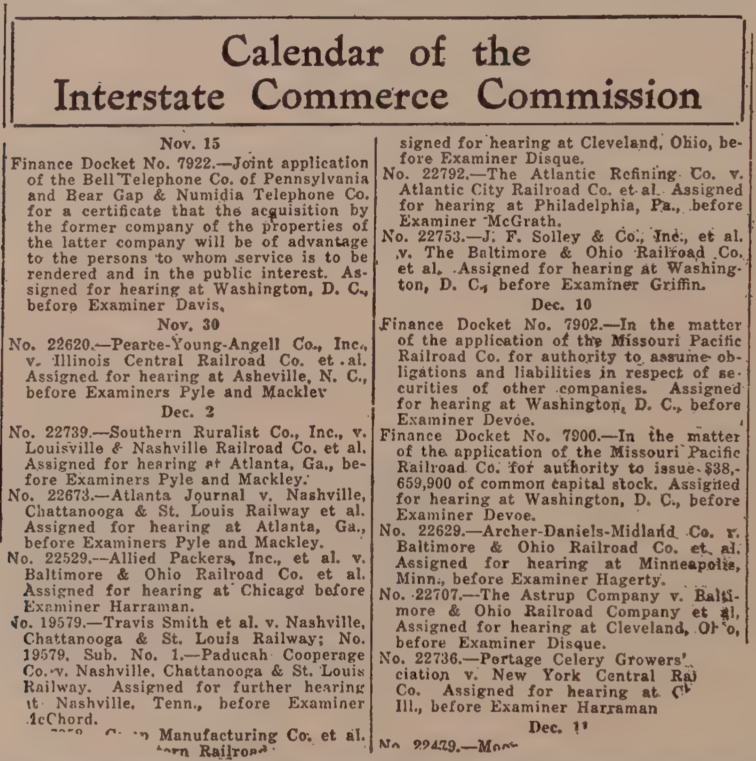
[7] Cf. Mr. J. M. Keynes' "The End of Laissez-Faire" in *Laissez-Faire and Communism*, 1926.

This control or regulation is accomplished under what are known as the "police powers" of various states, which enable them to regulate business in any way they see fit in order to insure that the public welfare shall not be endangered by the activities of business. These police powers extend not only to control of business in the interest of health, but also to control in the interest of the pocketbooks of consumers. So that when it can be shown that a business has been so monopolized as to threaten to maintain so dangerously high a price that many people may be forced to forego the use of a good or a service which is essential to their health or welfare, the state legislatures may step in and say that the price shall not be such as to cause this injury.



Calendar of the Interstate Commerce Commission

Nov. 15

Finance Docket No. 7922.—Joint application of the Bell Telephone Co. of Pennsylvania and Bear Gap & Numidia Telephone Co. for a certificate that the acquisition by the former company of the properties of the latter company will be of advantage to the persons to whom service is to be rendered and in the public interest. Assigned for hearing at Washington, D. C., before Examiner Davis.

Nov. 30

No. 22620.—Pearce-Young-Angell Co., Inc., v. Illinois Central Railroad Co. et al. Assigned for hearing at Asheville, N. C., before Examiners Pyle and Mackley

Dec. 2

No. 22739.—Southern Ruralist Co., Inc., v. Louisville & Nashville Railroad Co. et al. Assigned for hearing at Atlanta, Ga., before Examiners Pyle and Mackley.

No. 22673.—Atlanta Journal v. Nashville, Chattanooga & St. Louis Railway et al. Assigned for hearing at Atlanta, Ga., before Examiners Pyle and Mackley.

No. 22529.—Allied Packers, Inc., et al. v. Baltimore & Ohio Railroad Co. et al. Assigned for hearing at Chicago before Examiner Harraman.

No. 19579.—Travis Smith et al. v. Nashville, Chattanooga & St. Louis Railway; No. 19579, Sub. No. 1.—Paducah Cooperage Co. v. Nashville, Chattanooga & St. Louis Railway. Assigned for further hearing at Nashville, Tenn., before Examiner McChord.

Manufacturing Co. et al.

Railroad

signed for hearing at Cleveland, Ohio, before Examiner Disque.

No. 22792.—The Atlantic Refining Co. v. Atlantic City Railroad Co. et al. Assigned for hearing at Philadelphia, Pa., before Examiner McGrath.

No. 22753.—J. F. Solley & Co., Inc., et al. v. The Baltimore & Ohio Railroad Co. et al. Assigned for hearing at Washington, D. C., before Examiner Griffin.

Dec. 10

Finance Docket No. 7902.—In the matter of the application of the Missouri Pacific Railroad Co. for authority to assume obligations and liabilities in respect of securities of other companies. Assigned for hearing at Washington, D. C., before Examiner Devoe.

Finance Docket No. 7900.—In the matter of the application of the Missouri Pacific Railroad Co. for authority to issue $38,659,900 of common capital stock. Assigned for hearing at Washington, D. C., before Examiner Devoe.

No. 22629.—Archer-Daniels-Midland Co. v. Baltimore & Ohio Railroad Co. et al. Assigned for hearing at Minneapolis, Minn., before Examiner Hagerty.

No. 22707.—The Astrup Company v. Baltimore & Ohio Railroad Company et al, Assigned for hearing at Cleveland, Ohio, before Examiner Disque.

No. 22736.—Portage Celery Growers' ciation v. New York Central Rai Co. Assigned for hearing at C Ill., before Examiner Harraman

Dec. 1

No. 22479.—Mo

This excerpt from our greatest regulative body's calendar furnishes some idea of the range of activities within its jurisdiction, and of the technical difficulties of administering governmental controls. (From *U. S. Daily.*)

There are many instances of this kind of regulation, most prominent among which are the regulation of railway rates,[8] the rates of municipal railway corporations, of gas, telephone, and electric-light companies, and their like, which are usually called public utilities. But there is no reason in law or fact why the same regulations should not be extended to other businesses which threaten the same injuries to the consumers of goods and services.[9]

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[8] By the Federal Government, under the interstate commerce clause of the constitution.

The proponents of the system of regulation offer it as an alternative to the breaking up of modern large-scale businesses. They feel that regulation offers many favorable possibilities that the older system of "trust-busting" did not. It is positive instead of negative, they say; and recognizes the inevitable economic developments which bring about large-scale business; at the same time attempting to secure them for the interest of the general welfare. It takes the place of the old-fashioned "free competition" which was supposed to protect the consumer and producer alike. It has, admittedly, its administrative difficulties, but these, its advocates say, are far less than the importance of the savings that are to be made by its operation.

In any case, what one can say about the whole matter is that apparently the combination movement in business has such powerful economic impulses behind it that it has come to stay and that it would seem to be a rather foolish public policy to go on with attempts to smash business because it is big, instead of trying to take advantage of its bigness for the general welfare. Outlawing big business has merely succeeded in losing its benefits to the general public. Perhaps recognition of it may secure to them some of these lost benefits.

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[9] Cf. for a more extended discussion, R. G. Tugwell, *The Economic Basis of Public Interest*, 1922.

CHAPTER 19

INDUSTRIAL COÖRDINATION AND CONTROL. II

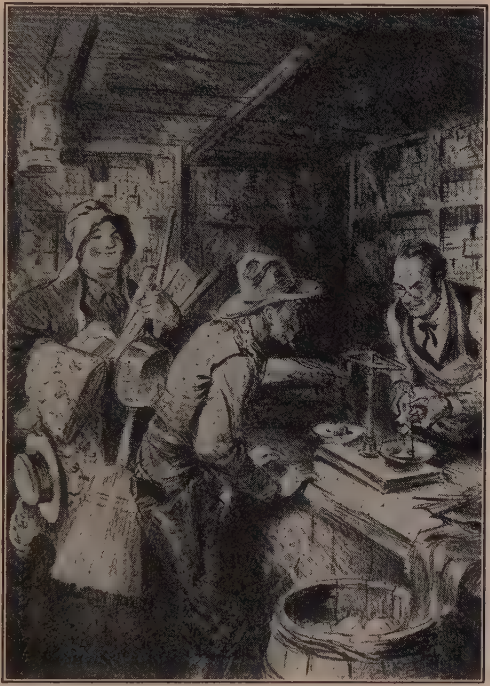
1. *Our Preoccupation with Prices*

As we have described the characteristics of the economic system, the reader must have been struck by the constant recurrence of the idea of money, of "pecuniary values," of "standards measured by money," in fact by the prevalence of money measurements throughout. This preoccupation is no accidental predilection of the authors. It is the way affairs are arranged in the going world. Goods and services are made for money, sold for money, valued as "worth" money. Producers and users of goods alike must keep a steady eye on this aspect of their activities.

We shall therefore try to offer some suggestions concerning the ways in which money prices are attached to goods. For what we mean when we use money terms is *price*. When we see a book in a store tagged $3.50 we instantly translate this to mean that we can have it by giving up three-and-a-half of the dollars we have acquired in some other way. Everything we acquire or give up through the ordinary commercial channels is acquired or given up on a similar understanding. The dollars are the common denominator of books, tobacco, hats, pins, and houses.

After all, in itself a dollar is nothing. It merely represents a variety of different things to the owners of each of them. But arrangements for the representation of commodities in some acceptable medium which is common to them all is necessary in such a system as ours, with labor divided, with businesses carrying on voluntary activities and with different industries making different goods or providing different services. Such a device contributes to the necessary coöperation in such a system: for, as we have already said and shall again and again insist, if we did not somehow coöperate as well as specialize, there could not even be our present rather rough way of assuring the uses of goods others make to the various specialists who concentrate on the making of only one thing. Further than this, also, it is customary to pay in advance for the raw materials, the labor, and partly at least for the plant and the machinery which among them result in finished goods. These finished goods will presumably be sold ultimately, and the payment for them will return to the productive organization which made them; but there is a period before they are sold when many preliminary payments have to be made. The financial system is organized to arrange for this and it is authorized by law to issue forms of money which will be, in this preliminary period before sale, available for running expenses.[1] Money is therefore a store of values as well as a medium of exchange.

The system of exchanges has by now grown very complex. It was devised piecemeal and had a slow evolution; but it serves the purpose of creating a coöperative out of a specialized system. Many kinds of markets exist; in fact a market may be said to exist anywhere where arrangements for the exchange of goods at certain prices take place. Such an exchange may be arranged, for instance, by a telephone conversation or by a casual meeting of any two people who are interested in buying or selling a good. But by far the larger part of these transactions take place in more or less organized exchanges which have grown up about natural and informal bargaining places, which, because they were convenient and much used, gradually found it expedient to form an organization and adopt rules for trading. There are, however, many bargains which are made outside these organized exchanges. The wage-bargain is usually concluded in ways which would scarcely answer to this description, though there is much organization even there; retail trading is differently arranged, though this occurs in definite establishments nowadays; and there are, besides these, always many informal bargains concluded between two interested parties.



Goods other than coins and paper have at various times been used as media of exchange. Gold dust was frequently used in our west during the nineteenth century. Every bartender and every storekeeper then kept a pair of delicate scales. Most of the goods in the arms of the prospector's wife must have come at that time from New England: cotton goods, a broom, a tin cooking dish; and their price in dust must have been high. (© American Bankers Association Journal. Used by permission.)

In order to discuss this bargaining and price-determining system somewhat more intelligibly we shall have to make some classifications. First we shall describe what is meant when "values" and "prices" are spoken of.

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[1] The financial system is described in some detail in a later chapter; we are here concerned mainly with money and prices.

Then we shall explain the means of bargaining for goods and of fixing prices under these heads: (1) ways of fixing retail prices, (2) ways of fixing producers' prices, and (3) ways of fixing prices in middlemen's markets. Only in this way can we come to understand the pecuniary preoccupation of people.

2. *The Relations of Values and Prices*

The difficulty of distinction between the value of a good or service and the price it commands is at once seen when we say, as we often do, that a thing is *worth* more than it sells for. Apparently worth is not always measurable in price. How much one would be willing to pay for a loaf of bread or a drink of water, however, is a problem which we never solve. All we know about it is that we must have been willing to pay as much as we did pay or it would not have been sold. This value of things *to an individual* has always seemed to economists one of the fundamentals of price-fixing. Value-in-use, it is usually called; and it seems to fix a limit beyond which prices cannot go. Indeed, economists often say that prices for a stock of goods can never rise beyond the limit of willingness to buy of the number of people who would be required to take the whole stock of goods off the market. For if the price rose higher than the willingness of any one of them, all the goods could not be sold. At the same time there may be a good many of these buyers who would have paid more—to whom the value in use of the good was higher than the price. So that we are reduced to saying that value in use sets an indeterminate upper limit for prices.[2]

Liverpool and Chicago are the world's greatest organized wheat markets. This is a business day in the Chicago "Wheat Pit." (R. H. Marlton, Courtesy Chicago Board of Trade.)

But this explanation only goes part way. If the upper limit of price is set by value-in-use, what sets the lower limit? Here the economists usually fall back upon the cost of production as the limit "below which prices cannot permanently fall." And, of course, they cannot remain long below this level, because any firm which was forced to sell its goods at less than they cost to produce could not long remain in the business of producing. And if consumers altogether refused to pay prices as high as costs the commodity would soon not be made at all. Also workers will not, without formidable resistance, sell their services for less than a money income which will maintain a certain standard of living which may be thought of as the cost of producing services. This is flexible; but only to a greater degree than are all costs—as accountants know very well. Once a cost is known, or thought to be known, the seller of the good or service will refuse, if he can, to sell it for less. Both business men and workers may be forced to do so, but not permanently, and not without a struggle. This is not true in an absolute sense, however, because sometimes it is cheaper to go on for a long time producing goods at a loss than to scrap a whole plant. And sometimes workers and farmers will go on selling at less than cost at the sacrifice of family welfare in the one case and permanent soil fertility in the other. But there will be resistance.

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[2] It might also be explained just here that value-in-exchange is a phrase which is often used as a synonym for price and to distinguish it clearly from value-in-use. We prefer to use the shorter term "price."

These then are, speaking generally, the upper and lower limits of the ordinary price range. But prices are fixed somewhere in between these limits. Just how and at what point is determined by a number of exceedingly variable conditions, as, for instance, (1) whether the commodity, because of its relative perishability, has to be sold quickly or whether it can be held indefinitely for sale, (2) whether its supply is easily extensible when a greater demand for it arises, (3) whether costs per unit rise or fall when more or less of it is produced, (4) whether the demand for it is elastic or inelastic—that is, whether, if the price falls, people will readily buy more, or, if the price rises, whether they will quickly stop buying, and (5) whether either those who buy or those who sell possess any peculiar advantages in bargaining such as a monopoly of the supply or a control of the demand. All these—and other conditions—may cause the price to be fixed finally anywhere within the upper and lower limits we have described, depending upon the peculiar situation of the market at the time of the exchange of goods for money. Any further explanation, therefore, has to be made in describing the typical markets of our exchanging system.

3. *Retail Prices*

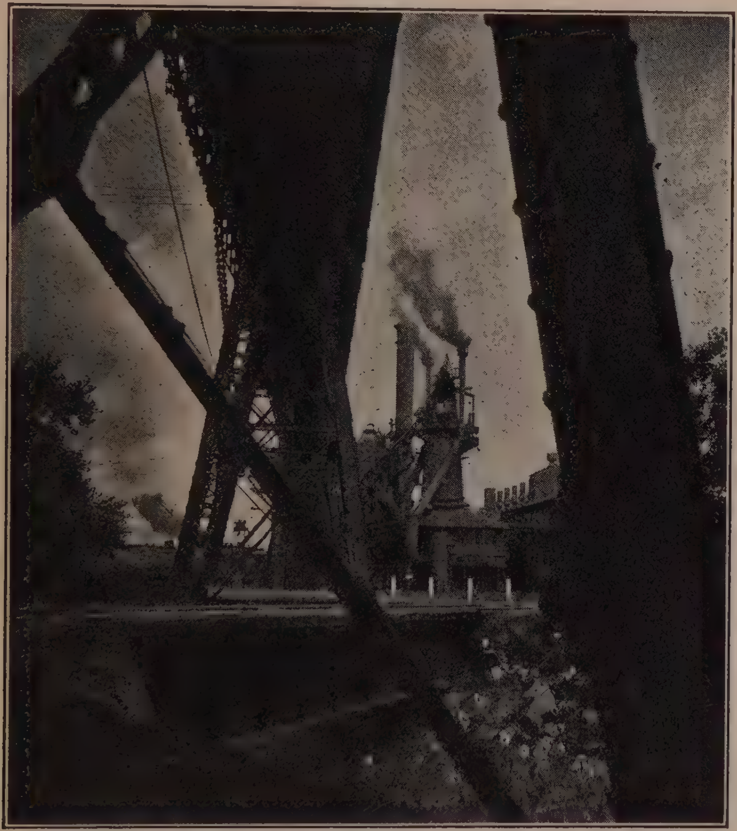
The final consumers of goods usually buy at prices which are fixed. There was a time when this was not so—when the buyers of goods met the sellers of goods at fairs and made a "higgling" bargain. But as affairs are arranged now, the ordinary consumer goes to a retail establishment and asks for what is wanted. When the price attached to the good, by those who have it for sale, is discovered, the consumer has only the alternative of paying the price or doing without the good. He has, in other words, only a veto power over prices. He does not higgle with the clerk. But these prices have been set with this veto power in mind. The retailer has a notion, at least, concerning the number of goods which will be taken at a certain price. And this is one of the elements in his determination of it. The most important other element is, of course, the price he, himself, has to pay for the goods—this and his expenses of doing business. Frequently, for staple articles, retailers pay prices to those from whom they buy which are uniform and relatively unchanging, representing, indeed, the manufacturer's guess as to the number retailers will take under certain conditions, together with estimates of what is necessary to maintain a program of manufacturing production. But this is only for staple or branded and nationally known goods. For many others the retailer bargains with middlemen, paying a price which is fixed within the limits set by his knowledge of the retail market and the middleman's requirements of coverage for costs and profits. It is in this bargain, where consumers do not participate, except as a guessed-at quantity, that retail prices are fixed.

(Photo Ewing Galloway, N. Y.)
One may higgle with these sellers of vegetables in Bombay.

(Courtesy Piggly Wiggly Corporation.)
In this modern chain store the price which is asked must be paid: there is no bargaining.

4. *Producers' Prices*

Producers' prices are determined at the other end of the marketing process. But here too there are some fixed relationships. In many cases the producer, like the consumer, has only a veto power. Prices which are established by the middlemen who form his outlet, can be accepted or the goods can be held. This tends to be true for a good many agricultural, mined, and manufactured goods. But in many other cases there is a process of bargaining in which the producer fares well or ill according to his strength or weakness in a particular situation. Always, however, there are certain dominant considerations. There are, for instance, the requirements of the production program. A typical large-scale modern business must be kept going. Idle plant, machinery, and operating forces create an expense, much of which continues whether the organization is occupied or idle, and is fairly constant whether the output is large or small—overhead costs, these are called. And in order to keep going, often, prices must be kept low to insure the steady absorption of the whole output by the market. But the extent of the production program is often gauged by the anticipated price to be received. Once the determination of this program has taken place, however, the costs per unit of product determine the average lower limit at which goods can be sold. Whether these goods are sold to middlemen, as they usually are by farmers, or very nearly direct to consumers, as they are by most automobile companies, costs must be met. How much higher than these costs prices will be is determined largely either by the

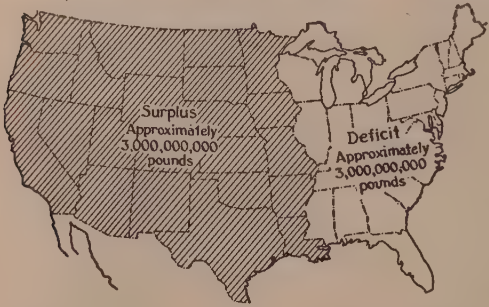


The proportion of expense which goes on whether many, few, or no products result is easily judged here. It is not altogether *use* which wears out such plants. They depreciate whether they are used much or little, and these depreciation charges are spread over the number of units of product turned out. If the products are many the costs are small for each; if the products are few the costs are high for each. (Photo by Eugene Hutchinson—Chicago. Courtesy Colo. Fuel & Iron Company.)

successful issue of consumers' absorption at the necessary price, or middlemen's willingness to buy, which is, in turn, determined by their judgment, also, of the consumers' willingness in the particular situation.

5. *Prices Fixed in Middlemen's Markets*

It is in the markets where middlemen deal that we find the forces of supply and demand operating most freely. Here there are no considerations of a production program to be maintained, nor of a standard of living to be got by the balancing of one good's use against another's. The middleman exists only to buy and sell and to profit by his activity if he can. For his profit he expects to be able to buy in low markets and sell in high ones. It is, therefore, his business to anticipate all the influences which may cause a change in prices. The expansion of demand, the shortage of supply, the curious vagaries of consumers, the terrific pressure of overhead costs—all these he estimates and, on his judgment of their influence on prices, he acts. It is risky. But he exists to take risks. If there were none, he would have no place in the system, except as an agent for producers and consumers, and there would be none of the profits of speculation then.

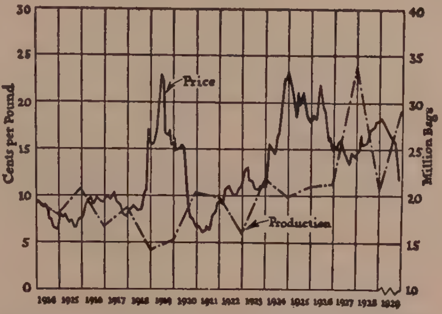


Areas of surplus and deficit for meat production. It is the middleman's function to relieve the surplus and supply the deficit. It is to his interest to buy low in the one area and sell high in the other. (Adapted from *Swifts Yearbook*, 1928.)

Prices in these markets are fixed by the purest higgling process which still remains in our system. In the organized markets which have grown up around the middlemen's activities, goods—and securities, if it is a security market—can always be bought and sold—at a price. But these prices are determined by all the variables we have mentioned: estimates of willingness to buy, estimates of costs to produce. But these are estimates, guesses. It is out of these markets, usually, that offers of prices to producers for their goods, and offers of prices to retailers for the sale of goods, come. It is the center of the whole exchanging process, around which the coöperation of our system is organized.

6. *The System of Prices as an Interrelating Network*

We have not meant to describe the price system in detail or to gauge accurately the forces which cause prices to be what they are. For this the interested student will need to pursue the matter further in more specialized texts.[3] Our treatment has been meant to indicate in an elementary way that in studying prices we are on the track of a difficult and intricate set of institutions which lie so very near the center of our economic order that they must be taken into account. If we are to achieve anything like a planned progress in industry it may quite possibly be found that we shall have to control through the price mechanisms. At any rate, since the markets where prices are fixed, various and contrasting as they are, operate as something in the nature of nervous ganglia, centers of control, they cannot be ignored.



Coffee prices display a definite relationship between production and price. A sharp rise in price is followed so promptly by an increase in output and *vice versa*, that a sort of two-year cycle is established: an increase of production is followed by a decrease in the next year. The large variations are accounted for partly by changes in world demand and partly by the influence of the weather on the crop. There is little variation in acreage from year to year since the plant is a perennial and requires four years to mature, but production is greater in years of good weather; also greater care in cultivation and harvest is taken in years of good prices. The influences which affect this, as all other prices are many and complex. (Adapted from *The Guaranty Survey*, N. Y.)

We have spoken of three kinds of prices—retailer's, producers', and middlemen's prices—because the ways in which they are influenced vary considerably and because it seems more profitable to consider them separately. Yet it must not be thought that these do not have mutual influences. It is obvious that the price of wool has *something* to do with that of clothes, that the price of wheat bears *somewhat* on the price of bread. It is well to remember that this influence is not a definitive and regular one and that it is filtered through the minds of many individuals, and, indeed, receives its final form only through the action of some person or group of persons; there is not involved a palpable force; no "law" of prices can be spoken of except in a most general way. Yet it is well to remember also that prices stretch like a network through our system, inclosing in their delicate threads goods, services, and persons. A touch anywhere may be likened to the touching a tightly strung chord: the vibrations communicate themselves to its farthest limits. No simple illustration of this sort is really descriptive, however, because of the many dimensions of our network. Impulses may begin anywhere which cause vibrations. Nature may set them up with a frost or a thunderstorm. A rain in Nebraska has caused many a flurry in the Chicago wheat pit. An individual may initiate them with a new invention, a speech, or a communicated idea. The price of rubber may be affected by the rumored invention of a cheap synthetic process for its manufacture. Textile prices may change because an executive refused to be tactful in averting a threatened strike. A President may affect many prices by affirming a belief in current prosperity. As delicate as this, and as subject to external influence, is the system. We do not often reflect that these extraneous situations or ideas affect ourselves. Yet in a sense we all realize their serious nature. We react in characteristic ways. We welcome change; we resist it; we adapt ourselves quickly to the changed situations revealed in price movements; or we refuse to be disturbed. On the whole, however, the industrial world is extremely sensitive to the indications of change; and a large part of executive activity has to be directed toward accommodation to these situations. And not only is this true of the producers of goods or traders in them; it is also true of workers, who must watch their wage scale, and of consumers, who must continually readjust their buying customs. For the most part the warnings and intimations of the need for social accommodation come to all of us through the universal telegraph-code of prices.

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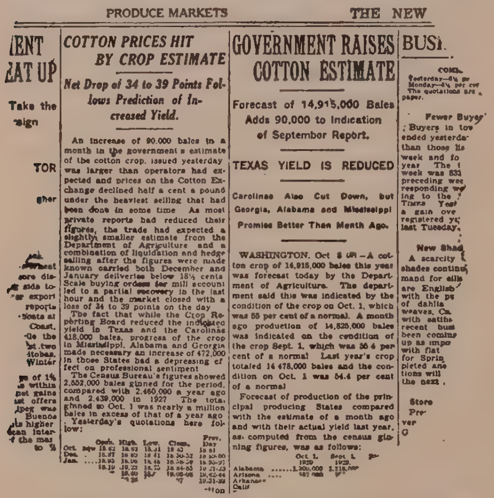
[3] Full and careful discussions will be found in most standard *Principles of Economics*. For several generations price theory has shared with theories concerning the apportionment of wealth the central place in economic literature. The rôle of prices has been referred to often in this book also; this is because of its obvious importance. We have preferred not to make it central to our description because we wished to direct attention rather to the producing and consuming of goods and to the ways in which these might be improved. But the impossibility of escaping price criteria and the preoccupation of most of us with them is nevertheless evident in much that we have said. For further study there may be consulted the books of Professors Edie, Taussig, Ely, Seligman, Seager, Davenport, Bye, and others, which are, in fact, mainly given to the theories of value and price.



PRODUCE MARKETS THE NEW

COTTON PRICES HIT BY CROP ESTIMATE

Net Drop of 34 to 39 Points Follows Prediction of Increased Yield.

An increase of 90,000 bales in a month in the government's estimate of the cotton crop, issued yesterday was larger than operators had expected and prices on the Cotton Exchange declined half a cent a pound under the heaviest selling that had been done in some time. As most private reports had reduced their figures, the trade had expected a slightly smaller estimate from the Department of Agriculture and a combination of liquidation and hedge selling after the figures were made known carried both December and January deliveries below 18½ cents. Scale buying orders for mill account led to a partial recovery in the last hour and the market closed with a loss of 34 to 39 points on the day.

The fact that while the Crop Reporting Board reduced the indicated yield in Texas and the Carolinas 418,000 bales, progress of the crop in Mississippi, Alabama and Georgia made necessary an increase of 472,000 in those States had a depressing effect on professional sentiment.

The Census Bureau's figures showed 2,552,000 bales ginned for the period, compared with 2,460,000 a year ago and 2,439,000 in 1927. The total ginned to Oct. 1 was nearly a million bales in excess of that of a year ago.

Yesterday's quotations here follow:

GOVERNMENT RAISES COTTON ESTIMATE

Forecast of 14,915,000 Bales Adds 90,000 to Indication of September Report.

TEXAS YIELD IS REDUCED

Carolinas Also Cut Down, but Georgia, Alabama and Mississippi Promise Better Than Month Ago.

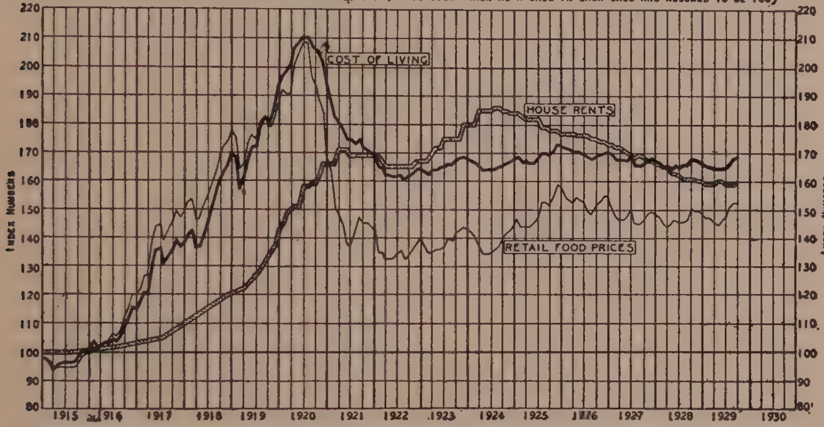
WASHINGTON, Oct 8 (AP)—A cotton crop of 14,915,000 bales this year was forecast today by the Department of Agriculture. The department said this was indicated by the condition of the crop on Oct. 1, which was 55 per cent of a normal. A month ago production of 14,825,000 bales was indicated on the condition of the crop Sept. 1, which was 56.4 per cent of a normal. Last year's crop totaled 14,478,000 bales and the condition on Oct. 1 was 54.4 per cent of a normal.

Forecast of production of the principal producing States compared with the estimate of a month ago and with their actual yield last year, as computed from the census ginning figures, was as follows:

Note the juxtaposition here of the cause and effect of one day's price movements for cotton. (From *N. Y. Times*, October 9, 1929.)

The achieving of greater stability and coördination is dependent upon the constantly better accommodation we can make, as individuals and as social groups, to the changes which have originated elsewhere and have indicated themselves to us through price changes. But not only can we improve by more flexible accommodation but also by reducing as much as possible the introduction of irrelevant or malicious influences. A price change which occurs because of market-rigging for private profit by a speculator is as unnecessary and as disturbing as a refusal, for instance, on the part of a monopoly to pass along to its consumers, reductions which may have been made in the cost of production. Both flexibility and stability are desirable but neither absolutely and without reference to other factors.

We shall have more to say concerning the shifting *levels* of prices, but we should like to make it clear that, to speak of a price *level* or of averages of prices at all, is to speak in what are really abstract terms; it is convenient to make averages, but it sometimes hides more than it reveals. The realist will always want to go back to the fact that each price for each good exists by itself. It has been caused by a multiplicity of converging forces which can sometimes quite safely be generalized; but it, after all, is the meeting point of the forces and the indicator of change to which the individual or the group must make accommodation. It would be a mistake to attempt to regulate these individual variations in price which represent so much to us that we should otherwise not know, which at best we can only infer. It is quite another thing to control the irrelevant influences, such as that we shall refer to as caused by our gold standard, for instance. For when these are eliminated, and only then, can prices really come to be what they should be, accurate indicators that something in the way of accommodation needs to be done.

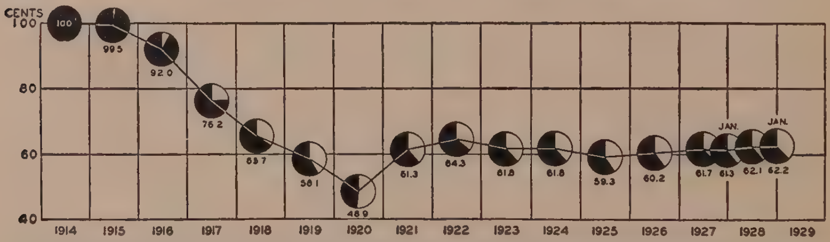


(For purposes of comparison, prices in December, 1914, have been taken as a base in each case and assumed to be 100)

This chart shows how, though there are minor differences in price movements for various kinds of commodities, the shifting purchasing power of the dollar carries them up and down in great sweeping movements. This tendency of price levels to shift as the value of the dollar shifts is one of the principal elements of uncertainty in economic life.

7. *Money, Shifting Levels of Price and Their Stabilization*

The common denominator into which all goods are translated is money. The effect of this way of expressing relationships among goods and services is to create fluidity and ease of transference and to make it possible for the specialists to remain specialists and yet to maintain relationships with the system as a whole. The standard of our money is the dollar; the British standard is the pound sterling; the French standard is the franc—and so on. There is, however, more than one kind of dollars; and, also, although they are nominally based on a fixed standard, they actually will buy more goods at one time than at another. And these goods are the standard of living which the worker is trying to protect and the materials which the business man is buying and selling. To both, therefore, it is a constant source of uncertainty that the dollar shrinks and expands in purchasing power. If it would always buy equivalent amounts of corn or flour or shoes or chairs or steel, every one would be able to look ahead with more confidence. As it is, when a business man contracts to sell or to buy goods three months or a year ahead for $10,000, he has no way of knowing how much that $10,000 will represent, by that time, in power to purchase other things. If he is operating on a basis of ten per cent profit and the dollar shrinks in purchasing power he may find his profit cut to five per cent or even entirely wiped out. Similarly a wage contract made in shifting dollars may mean a higher or lower standard to its recipients according to the appreciation or depreciation of the dollar.



An illustration of the use of index numbers: changes in the purchasing power of dollars. 1914 is represented as 100. Other periods (shown as segments of the circles) are represented as percentages of this basic dollar (100). (Courtesy National Industrial Conference Board.)

This may seem a strange phenomenon at first. But it is directly consequent upon the fact that we have adopted gold as the standard for money and that the dollar has been made equal in value to 23.22 grains of it. Now gold, like other commodities, shifts in quantity produced and used, and so in price. But since the dollar represents so much of it by weight, every time the price of gold shifts, the purchasing power of the dollar shifts also.[4]

But the whole matter is complicated also by our having supplemented gold with other media of exchange. We have paper money—notably Federal Reserve notes—and bank checks as well as subsidiary coins such as half-dollars and dimes. These are all so issued that they bear a fixed relationship to gold; so that, although we have many kinds of money other than gold, still the yellow metal—23.22 grains of it—remains the *basis* of our currency. And price levels continue to shift up and down as gold fluctuates in purchasing power. How serious this is anyone knows who has observed the recent "rises in the cost of living" which, as we see, were nothing more or less than a fall in the purchasing power of the dollar. We can measure these rises or falls in the price level by averaging all prices for a certain period and calling this average 100, expressing then all deviations from that average over a subsequent period of time as percentages of it. These percentage measurements are sometimes called *index numbers*.

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[4] To the extent, at least, to which gold is actually the single element in fixing the quantity of money. The authors believe that we have not a "gold" currency but a "managed" one. Into the theory of money involved in this we cannot go here. We must leave it by indicating that gold is still the "basis" of our currency, which means that the extant quantity of gold is still one of the elements in determining the amount of purchasing power which is at any one time available.

The main attack on the dollar as a valid medium of exchange, when it so obviously causes great uncertainty throughout society, and makes it almost impossible to plan exactly any distance ahead, has come from economists who want to substitute a "goods dollar" based on the index number of all commodities for the present dollar based on 23.22 grains of gold.[5] This dollar, they say, would, at least, not forever shift in its power to purchase other commodities and would therefore bring about a necessary stabilization of the general price level. This would obviate the social difficulties consequent upon uncertainties of future contracts in dollars, they say, and go a long way toward bringing about the regularization of industry. It would even obviate the worst difficulties associated with the business cycle, which we shall presently discuss, because the main difficulty there is the fact that prices rise, and make it impossible for consumers to buy, or fall, and make it impossible for manufacturers to sell.

We think that no one can say whether such a plan for stabilization would operate successfully. The arguments for it seem to outweigh those against it; and on the whole, it seems to promise more than could possibly be lost by trying it. An industrial society such as ours is, in the grave difficulties of directing effort and eliminating waste which we face, ought to grasp at any promising scheme for melioration.

8. *The Business Cycle.*

Closely allied to the problems we have been considering is another which has recently had much discussion—the "business cycle" and its subsidiary problem of unemployment. Perhaps the severest criticism of our whole system of socio-industrial planning lies in the facts surrounding these phenomena. For by study of them we are driven to the conclusion that here is a picture of human unintelligence and failure to master the conditions of existence at its very worst. When we discussed the contrasts involved in the ideals of making goods and of making money, we called attention to the anomaly of "progress" and "poverty" existing together. Here we see it again. For in the alternate periods of "prosperity" and "depression" we see each preparing the changes which create the other and we see nothing done to mitigate the evil consequences of either the feverish straining of effort of the one or the utter stagnation of the other.

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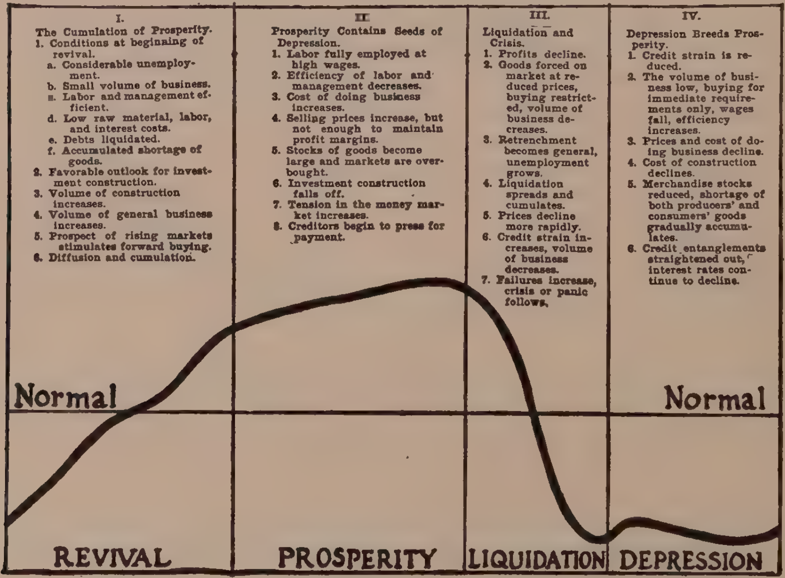
[5] Cf. Irving Fisher, *Stabilizing the Dollar* (Macmillan, 1920). The "goods dollar" would be managed by theoretically maintaining a gold dollar currency with all the gold segregated in treasury vaults. As the index of prices changed, the gold content of the dollar could be added to or subtracted from by a bookkeeping process.

Depression, especially, has social consequences of the bitterest sort and the tragedy is intensified by the spectacle of workers in dire need of the very goods which ought to be made by the idle machinery of the silent factories. Something is evidently very wrong here. And apparently a remedy cannot be found by the technicians who operate industry. The trouble is with the larger phases of the general planning of activities—the coördination of businesses and of industries.


I.
The Cumulation of Prosperity.
1. Conditions at beginning of revival.
a. Considerable unemployment.
b. Small volume of business.
c. Labor and management efficient.
d. Low raw material, labor, and interest costs.
e. Debts liquidated.
f. Accumulated shortage of goods.
2. Favorable outlook for investment construction.
3. Volume of construction increases.
4. Volume of general business increases.
5. Prospect of rising markets stimulates forward buying.
6. Diffusion and cumulation.
II.
Prosperity Contains Seeds of Depression.
1. Labor fully employed at high wages.
2. Efficiency of labor and management decreases.
3. Cost of doing business increases.
4. Selling prices increase, but not enough to maintain profit margins.
5. Stocks of goods become large and markets are overbought.
6. Investment construction falls off.
7. Tension in the money market increases.
8. Creditors begin to press for payment.
III.
Liquidation and Crisis.
1. Profits decline.
2. Goods forced on market at reduced prices, buying restricted, volume of business decreases.
3. Retrenchment becomes general, unemployment grows.
4. Liquidation spreads and cumulates.
5. Prices decline more rapidly.
6. Credit strain increases, volume of business decreases.
7. Failures increase, crisis or panic follows.
IV.
Depression Breeds Prosperity.
1. Credit strain is reduced.
2. The volume of business low, buying for immediate requirements only, wages fall, efficiency increases.
3. Prices and cost of doing business decline.
4. Cost of construction declines.
5. Merchandise stocks reduced, shortage of both producers' and consumers' goods gradually accumulates.
6. Credit entanglements straightened out, interest rates continue to decline.
Normal
Normal
REVIVAL
PROSPERITY
LIQUIDATION
DEPRESSION

An imaginary picture of the business cycle. (Printed by permission of Mr. Malcolm C. Rorty.)

"Cycles" are so called to direct attention to their generally rhythmic nature; for, though neither the time nor the extent of their swings have any exact correspondence with each other, the general picture is one of continuous movement, upward toward a peak of activity and downward toward a trough of stagnation. Between are all possible gradations; but there is never any extended period of stabilization when there exists so nice an adjustment that the needs of one business or one industry are precisely supplied by others; and when the product of each finds a ready disposal to other businesses or to final consumers.

What happens is that suddenly, following a period of intense activity, factories find their orders falling off, and merchants cannot sell their goods because consumers refuse to buy. This refusal is not voluntary. No limit to men's desires for goods has ever been found. It follows from an inability to buy so much of every good as would keep merchants active and factories running at prices sufficient to cover all costs and enable every one to make profits. Naturally this refusal to buy is first felt in the non-necessity-producing industries. These can be foregone most easily. But when automobile and piano factories close, for instance, whole sections of workers are thrown out of jobs. And since our society is so organized that the income of most individuals is conditioned upon employment, their incomes are completely cut off. This reduces the demand even for necessities. Gradually all industries and all individuals are affected as the disturbance spreads. Matters eventually become so bad that millions are unemployed, many plants are either idle or are working only on part-time schedules, and destitution invades the working population.[6]

Gradually, following this phase of the cycle, merchants dispose of the goods on their overladen shelves at the reduced prices which feature this depression. Finally they begin ordering again from manufacturers, the factories reopen and the upward movement begins which ultimately will end again in a crisis and a slump toward depression.

These movements in commercial and industrial life have been going on since history began, apparently; but their consequences have become more acute since the beginning of industrialism; indeed, the "business cycle" as a phenomenon of raggedly regular rhythmic movement is probably more properly to be ascribed to the age of the money economy alone. Certainly crises have come closer together in the industrial age as one of the accompanying phenomena of the acceleration in the tempo of all social changes, and have assumed that curious rhythmic aspect which gave rise to their description as "cycles."

For centuries men believed prosperity to be the "normal" state of business, a condition interrupted by periodic crises. In the broad sense of the word, including famine, pestilence, and other occasions of social distress, crises are as old as the human race. In a more restricted sense they still go far back. Such banks as there were in the seventeenth century—developing from the money-lending business of the goldsmiths—were seriously affected by the destruction of the British fleet at Chatham in 1667, and by the order of Charles II in 1672 which stopped payments from the British exchequer.

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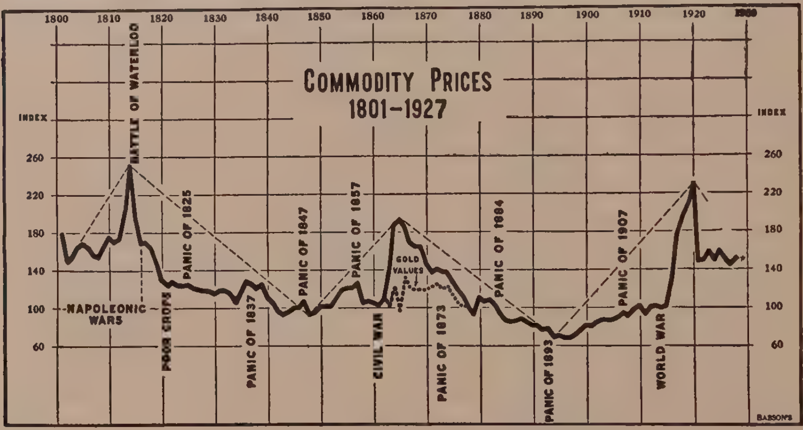
[6] No really extended discussion of the phenomena of the business cycle is attempted here. For such a discussion see W. C. Mitchell, *Business Cycles*, the standard work in this field, or, for a shorter treatment, the volume called *Business Cycles and Unemployment*, prepared by the National Bureau of Economic Research (McGraw-Hill, 1923). See also *The Economics of Business Cycles*, by A. B. Adams, for a concise treatment (McGraw-Hill, 1925).

In both these cases there was a "run" on the goldsmiths and a business situation which might accurately be termed a crisis. But cycles, as we understand them, did not appear until the end of the eighteenth century; that is, they did not appear until a large part of the population was engaged in making and spending money and had become dependent upon banks and financial institutions. Even after they appeared the cyclical nature of the phenomena was not appreciated and attempts were made for many years to explain the facts on an assumption of prosperity as "normal." The modern conception has been set forth perhaps most clearly by Professor Wesley C. Mitchell in the description, partly explanatory, which is summarized below.[7] Since the cycle is a cycle, it cannot be said, strictly speaking, to have a beginning. Professor Mitchell chooses to begin his analysis with the revival.



*The dash lines indicate the major price movements. * Current level of prices.*

"The purpose of the chart above is to give a long-range bird's-eye view of the trend of commodity prices over the past 125 years. As no continuous index of prices is available for this entire period, we have employed Hansen's index from 1801 to 1825, Juergen's index from 1825 to 1860, Mitchell's index from 1860 to 1880, U. S. Bureau of Labor index from 1880 to 1923 and Fisher's index from 1923 to date. These various indices follow the same trend so closely that they are easily spliced and adjusted to each other. All of the indices used to obtain the composite commodity index have been adjusted to the same base (1913 = 100).

"Note particularly that while thruout the major movement we have had succeeding areas of over-expansion and depression, the long-swing trend of commodity prices has been determined by the direction of the major trend." (Courtesy of Babson Statistical Organization.)

The revival inherits from the preceding depression a low level of prices, drastic reduction in costs of doing business, narrow margins of profit, liberal bank reserves, conservative policies in capitalizing business enterprises and granting credits, moderate stocks of goods, and cautious buying. The factors in the revival are three:

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[7] From his *Business Cycles*, 1927.

1. An expansion in the physical volume of trade. This may be slow or may be stimulated into sudden vigor by some propitious incident such as a profitable crop. Wherever it starts, the revival spreads into other fields so that the activity becomes general and cumulative.

2. The growth of business optimism resulting from the foregoing.

3. The cessation of the fall in prices and, later, a rise in prices. This rise is cumulative but it is not at all even. The wages of labor and overhead costs lag behind retail prices to such an extent that though raw materials and bank loans often rise faster than retail prices, many concerns reap large profits. These profits, of course, bring more optimism and further stimulate the expansion in the physical volume of trade.

But the process sketched above, while enhancing prosperity, also accumulates certain stresses which undermine the conditions upon which prosperity rests. These stresses are:

1. Gradual increase in the costs of doing business, including increases in the direct costs of wages and raw materials, the inefficiency of the raw labor that has to be brought in, and the inefficiency of management.

2. Accumulating tension of the investment and money markets. This situation is unfavorable to the continuance of prosperity because:

a. High interest rates reduce the prospective margins of profit.

b. It checks the expansion in the volume of trade from which prosperity is developed by checking the ventures projected.

The only method of offsetting "a" and "b" above is a continual process of boosting prices to cover them. It is obviously impossible to keep on raising prices indefinitely. Bank reserves could not stand the repeated calls for credit; certain prices are stereotyped by law, public commissions, long-term contracts, or custom. To the extent that some concerns can keep on raising prices the difficulties of the others are further aggravated. The margin of profit becomes narrower.

The worst feature of the decline in profits, however, is not the impending loss of expected dividends; it is the creation of doubt concerning the stability of outstanding credits. Business credit is based primarily upon the capitalized value of present and prospective profits, and credits outstanding at the zenith of prosperity are adjusted to the great expectations that prevail when the volume of trade is enormous, prices are high, and business men optimistic. When profits begin to waver creditors fear lest the shrinkage in the market rating of business enterprises which owe them money will leave no adequate security for repayment. Hence they refuse renewals of old loans to enterprises which cannot stave off a decline in profits; and they press for the settlement of outstanding accounts.

This process of liquidation, once begun, continues rapidly because each concern is compelled to call on others to liquidate. The result may be a mild crisis or an absolute panic. Banks have the double strain of a demand for more loans and for a return of deposits. Too many refusals may precipitate a panic.

Following the crisis is a period of depression, the limit of which is, after a time, reached. Direct costs have been greatly reduced by wage cuts and the fall in the prices of raw materials and bank loans. Unemployment tends to restore labor's efficiency. Businesses are reorganized, bad debts written off, and depreciated properties written down. Buyers' strikes are called off, demand for goods ceases to contract and begins to expand. With this beginning of revival the cycle is complete.

Other explanations of the cycle may be grouped as follows:

A. Physical causes.
    I. Jevons. Sun spots.
    II. Moore. Eight-year periods in the conjunction of Venus produce similar cycles in mundane weather, crop-yields, and business.
    III. Huntington. Weather cycles affect health which in turn affects business.

B. Psychological causes.
    I. Pigou. "Optimistic error and pessimistic error, when discovered, give birth to one another in an endless chain."

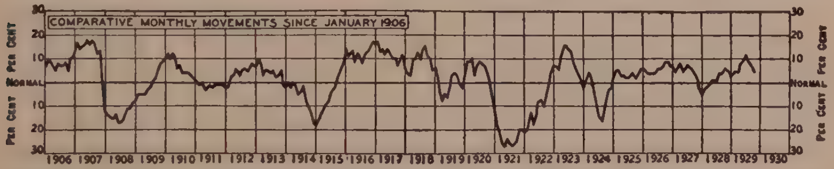
C. Institutional causes.
    I. Processes of business management.
        1. Hardy. Uncertainty gives rise to alternate over- and under-production of goods.
        2. Veblen. Discrepancy between prospective profits and current capitalization.
    II. Processes of producing goods and of distributing and spending incomes.
        1. Hastings, Foster, and others. Incomes disbursed by business enterprises are alternately less and more than the full value of goods produced for sale.
        2. Socialists. Overproduction resulting from exploitation of workers who receive in wages less than they produce.
    III. Processes of consuming, saving, and investing capital in new construction.
        1. Hull. Relatively slight changes in the demand for consumers' goods and in costs of construction cause far more violent changes in the volume of construction work, which in turn react to heighten changes in demand for consumers' goods.
        2. Hobson. Large incomes, which grow rapidly in prosperity, lead to over-saving and over-investment in new plants so that supply exceeds current demand.
    IV. Processes of banking.
        1. Hansen. Banks increase purchasing power of business men when prospects are favorable by lending credit; later com-

pelled to restrict advances. In following crisis and depression idle funds accumulate in banks and enable them to start new expansion.

2. Fisher. Discount rates lag behind when prices rise, giving borrowers increased profits and stimulating activity. Shortage of reserves forces a rapid advance of discount rates which pass prices. Crisis and depression are precipitated. Increasing reserves and dull business finally reduce discount rates faster than prices are falling and so prepare for a resumption of activity.

Although it may appear that the foregoing explanations of the cycle are mutually exclusive, actually this is not the case, for there is more or less truth in each of them. At present most students feel sure of only one thing: that no *single* factor adequately explains the cycle. X And whatever may be the true explanation of the facts, the conception of the cycle is most valuable and useful. In using it we have first to measure it, a matter next to be considered.

Every one knows that pig-iron production, the prices of securities, cotton consumption, bank clearings, retail prices, and other similar phenomena vary from month to month or even from hour to hour. A record of these fluctuations over a period of time constitutes a statistical series. Any one of them, pig-iron production, for example, not only shows conditions in one industry, it is also some indication of general business conditions; but by combining several such indices it is possible to secure an index that will reflect more accurately general conditions. One such composite index has been prepared by the American Telephone and Telegraph Company.



This chart is based on statistics compiled by the Statistical Division, American Telephone and Telegraph Company. (Used by permission.)

The important suggestions for eliminating the cycle might be grouped as follows:

1. Changes in the banking system (largely accomplished by the Federal Reserve Act of 1913). ✓

2. The utilization of government and large industrial construction jobs as a balance wheel for industry, beginning them as other business falls off and stopping them during periods of great activity. ✓

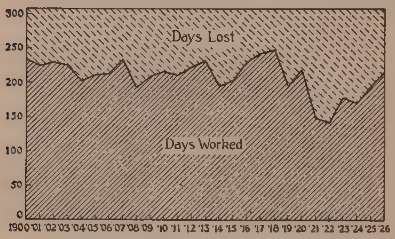
3. Stabilization of the dollar. ✓

4. Dissemination of information concerning the cycle among business men, including the attempt to forecast business changes. ✓

5. Closer coördination among various industrial units. ✓

Some hope of the mitigation of the general bad consequences of the unemployment feature of the cycle is held out through schemes for insuring against its recurring periods. This is only to let the surpluses of prosperity meet the deficits of depression. At best such schemes, though important as makeshifts, are but makeshifts after all. And what is really needed is such a system of coördination of effort in the whole industrial world that these cyclical movements will be eliminated.

This would not eliminate all unemployment,[8] for much of it is due to social change—the shifting of demand from one good to another, for instance, or the invention of machines to perform activities performed before by human workers—and this form of unemployment can only be met by such social insurance as will force the costs of progress to be met out of its surpluses.[9] Another cause of unemployment is the seasonal nature of agriculture, canning, lumbering, building, and many other occupations. The difficulty here is one of forcing the industry to accept responsibility for the full-time support of the workers it requires only during short seasons, or such a coördination of needs that the seasons of work somehow dovetail and do not leave the individual periodically high and dry. Government employment agencies reached a high development during the war and mitigated considerably the severity of seasonal unemployment. They were promptly abandoned after the Armistice, however, when they were most needed, and have never been revived, though a number of states maintain such agencies within their own limited territories.



The Coal Miners' Year. (Based on data from U. S. Geol. Survey.)

All the causes of unemployment referred to have, however, had to do with the larger social problem of lack of stability and direction in the industrial system of which they are symptomatic.[10] Unemployment, after all, is in a sense a secondary problem of consequence only (1) because it thwarts the desires of men to be active in industry and (2) because it cuts off their income. It may be that it is a mistake to make income dependent upon work. But if it is to be made so dependent, society ought to acknowledge its responsibility to provide the work. Failing that, the least that can in justice be done is to keep families, deprived of income through no fault of their own, from the worst consequences of poverty.

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[8] For a discussion of unemployment, F. C. Mills, *Contemporary Theories of Unemployment* (Columbia University Press, 1922).

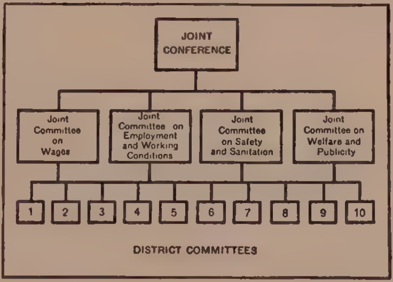
[9] For a discussion of this problem see H. R. Seager, *Social Insurance* (Macmillan, 1910).

[10] This is true even of the "technical unemployment" to which reference was made in our chapter on urban poverty. The causes of unemployment are again discussed in a later section.

One reason, perhaps, why industrial owners and managers have not before now done more than they have toward the solution of the general problems of coördination and mutual group adjustment is that they have not had to. A plant shut down means to its owners loss of profits. To the workers it means loss of bread and butter. The loss of the workers is of an order set apart. Hunger and cold are the direst of personal tragedies. That anyone in our time should live under this threat is a bitter critique of our system. Forcing the industry to bear full-time wages as a first charge might result in stimulating a now hesitant movement toward really comprehensive industrial planning. And it cannot be said to involve more than simple justice to the workers involved.

9. *Industrial Democracy and Production*

We have already said that it seems probable we shall continue the movement already well begun toward the democratization of industry. This may happen through the enlarged ownership of corporate shares by the rank and file of workers or in some other more revolutionary fashion. But events seem to be forcing it. It may be well, therefore, to raise the question of the probable effects of democratization upon productive efficiency and especially upon coördination.[11]


JOINT CONFERENCE
Joint Committee on Wages
Joint Committee on Employment and Working Conditions
Joint Committee on Safety and Sanitation
Joint Committee on Welfare and Publicity
1
2
3
4
5
6
7
8
9
10
DISTRICT COMMITTEES

A representative plan for employee representation is charted here. The numbered squares represent districts in the plant. In the districts questions originate which are referred to the proper joint committee and, if necessary, to the joint conference. (Used by permission of the Goodyear Rubber Company.)

One argument often used against workers' control is based upon probable lack of discipline when the pressures of fear now in use are removed. This extends to saying that not only will workers loaf in the factories but also they will indulge in inter-industrial disputes which will make coördination more difficult than it now is.

It seems clear, at least, that withholding of effort will be notably reduced by individual workers. For plant efficiency will depend upon the contribution to the finished product of each worker. And his fellows—rather than as now his employers—will discipline him for loafing. And they are in a better position to enforce it than the employer ever was. There may be some notable difficulties in the selection of executives; trade-union experience would seem to indicate it. But a more serious drawback may turn out to be the bargaining which will still go on among industries, each competing for a share in social income. No more than a suggestion of these future problems can be indicated here. It may well be that we shall have to sacrifice something of our industrial efficiency for the humanizing of the system. Certainly in a democratized industry problems will be solved more as our political problems have been solved and less in the autocratic way we have been accustomed to solve industrial ones. The prospect of a long period of chicanery and jobbery such as we have had in politics may not be pleasing but it seems to be indicated in a more democratic future. It too must be set down as one of the costs of progress.

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[11] Consult, for an extended treatment, W. J. Lauck, *Political and Industrial Democracy*, 1926.

SECTION D

THE FINANCIAL ORGANIZATION

CHAPTER 20

INDUSTRY AND THE BANKING SYSTEM

1. *The Place of the Financial Organization*

It would be expected in a system so continuously preoccupied with pecuniary affairs as is ours that there would be a series of institutions grouped about money and prices. And there is indeed a very complex financial organization. It is arranged partly for the provision of money to carry on the transactions of business life, and has a very intimate relationship with the prices of things. But it also serves the purpose of collecting and distributing or allocating the funds available to the various businesses of the industrial world and for this reason too occupies a central place. A series of institutions which provide currency, influence prices, and collect and allocate funds cannot be ignored even in the most elementary study of economic life. And programs for improvement cannot be formulated successfully without considering the influence of the financial organization.

> **CHICAGO, Oct. 19.—The Waukegan-North Chicago Chamber of Commerce sent an innocent, unsophisticated brand-new dollar bill out into the cold cruel world, attaching a circular for a record of all transactions in which it figures.**
>
> **The bill returned today, after 14 days of travel, soiled, wrinkled, dejected-looking, and its virginal crispness gone. It had kept away from churches, banks and all places of amusement and reported 31 changes of ownership, having been spent:**
>
> **Five times for salary.**
> **Five times for tobacco.**
> **Five times for cigarettes.**
> **Three times for candy.**
> **Twice for men's furnishings.**
> **Once for collar buttons.**
> **Three times for meals.**
> **Once for auto accessories.**
> **Once for bacon.**
> **Once for washing powder.**
> **Once for garters.**
> **Twice for shaves.**
> **Once for tooth paste.**
>
> (*N. Y. Call*, October 20, 1922.)

2. *Media of Exchange*

The various media of exchange provided for modern trading are supplied through the financial organization. Moneys are paid out over the counters of banks, and, though they are created or authorized by the government, almost invariably they reach circulation in this way. There is another important medium of exchange besides money—bank checks and other negotiable instruments—which we shall presently discuss; but first we may enumerate and describe briefly the varieties of money.

There is gold. Gold is the basis of our money. Twenty-three and twenty-wrong ~~2.58~~ 25.8

25.8 9/10 fine
2.58 alloy
23.22

two hundredths grains of it constitute a dollar, the American dollar. And all our other moneys are expressed in terms of this weight of gold as a standard. But banks nowadays pay out very little gold coin. We use mostly paper money; but this too has many varieties. There are gold and silver certificates which are circulated in the place of gold and silver held in the Treasury vaults. Also, however, there are forms of paper money for which only a fractional reserve is kept in gold. These are largely, now, Federal Reserve notes, though there are remaining in circulation some older forms of paper money which, for simplicity's sake, we shall ignore.[1] Aside from these coins and notes, there are also the familiar coins of minor denomination which may be offered in payment of debt only within restricted amounts fixed by law.

Barter (Courtesy *Nation's Business.*)

The purpose served by all these is quite simple: they are for convenience in the exchanging of goods. They have relieved society of the necessity of bartering, of finding the exact equivalent in goods for what one has to buy or sell, which was one of the great drawbacks of primitive commerce. Now the values of all things are somehow transformed into prices expressed in money terms—gold dollars—so that one sells for dollars what he cares to and buys for dollars what he needs.

Bank checks and other negotiable instruments such as drafts and bills of exchange, are, in their wide modern use, the most recent and by far the most important of all media. The check—expressed again in dollars—when given by one person to another in payment, means simply that the maker of the check transfers funds from the bank in which his funds are to the other party to the trade, who, very likely, deposits this check in his own bank. And so he may now pay his own obligations by similarly checking the transferred funds from his deposit account.

3. *Bank Credit*

This leads directly to the consideration of bank credit. For it is very often by the extension of credit that the original funds are created upon which checks are drawn. And here we come to another of the vital functions of financial institutions. Within limits, fixed by the requirements of legal reserves of gold, and by the judgment of their officers, banks may create purchasing power and confer it upon such individuals as may care to incur the obligation of its repayment. For this the bank charges an interest from which its profits are derived. Usually individuals who borrow are persons who are in money-making enterprises, who wish funds for carrying on their trades, and who expect such a surplus to eventuate that they can pay the interest demanded by the bank and still have a gain for themselves. This defines a part of the relationship which exists between the banks and the business community.

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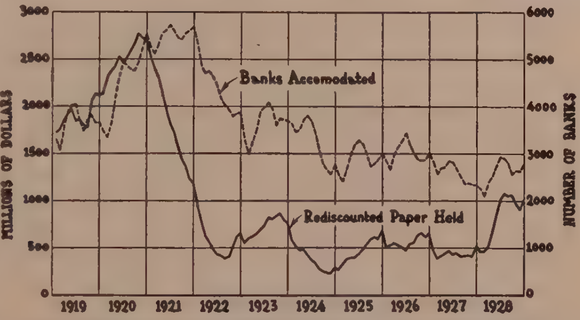
[1] For a full discussion the student is referred to H. G. Moulton, *The Financial Organization of Society* (The University of Chicago Press, 1925).

It will be seen that banks may discriminate among the businesses to which they lend and that, by doing so, they determine to a certain extent the direction which industrial activity will take. We shall refer to this function again a little later. For our purpose here it is desirable first to understand that when a borrower approaches his banker for credit, his banker demands from him a signed paper, called a note, which sets forth the terms of the obligation. Usually this note will be due in thirty, sixty, or ninety days, and must then be paid unless the borrower can renew the loan for a period. The banker may protect himself from loss by requiring the pledge of property equivalent at least to the amount of the note, which he may dispose of in the event of a failure to pay. This is called "collateral." The transaction is completed by an entry in the accounts of the bank which recognizes the borrower's right to withdraw such sums as he may have arranged for. He can then write checks for the discharge of any debts he may incur in buying goods. But not quite to the full amount of the loan, for the bank will only have given him credit on its books for the *net* amount of the loan, which means that the interest for the full period will be deducted in advance. This is called "discounting."

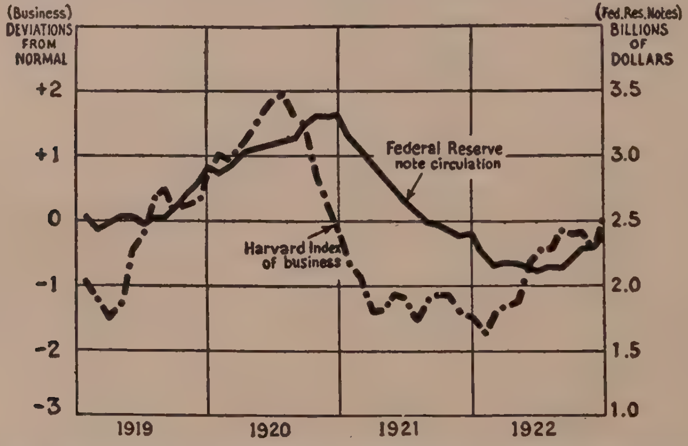


This chart shows the rediscounting of commercial notes by the Federal Reserve Bank from 1919 to 1928, together with the number of banks from which the paper came. It will be seen that the banks involved range from approximately 3000 to nearly 6000 and that the millions of dollars involved range between 300 and 3000. The immense service and influence of the System must be apparent. (Data from *Federal Reserve Bulletin.*)

4. *Money and Prices*

But suppose that, instead of writing a check for the payment of his debt, the borrower from the bank wishes to pay his creditor in cash; where does the currency come from? The answer to this is that the banker takes the note signed by the borrower to the Federal Reserve Bank in his district and has it "rediscounted," which means that he guarantees its payment at maturity and receives credit at the Reserve Bank for it, less the rate of interest then prevailing. This rate will be less than the rate he receives from borrowers, so that he profits by the margin. This transaction gives him the right to withdraw from the Reserve Bank federal currency to the amount of his credit there. And it is this money which he pays out over his own counters as it is demanded.

From all this it will appear, perhaps, that money, in the widest sense of the term, including bank checks and negotiable paper instruments, is rather flexible in its quantity. This depends largely, it appears, upon the total funds involved in the notes discounted by commercial banks. And this is exactly the result desired; because the amount of discounting (or borrowing) at banks is a fairly accurate measure of the amount of money needed to effect the buying and selling transactions of the community, borrowing being mostly for this purpose.[2]



This chart shows the flexibility of Federal Reserve note circulation from 1919 to 1922. The dotted line shows the Harvard index of business activity. An ideal flexibility would have kept note circulation in exact correspondence with this line over the period. Instead of an exact correspondence there is a general one, note circulation coming to a peak late and deflation lagging behind business decline. However, the flexibility is greater than under the old system, when no relationship existed between the need for currency and the supply of it. Rediscounted notes are admittedly not a perfect index of business activity, but they are the best we have so far managed to use as a currency basis. (Chart from the F. R. Exhibit at the A.B.A. meeting of 1923.)

We are at once involved here in a consideration of the effect of the issuance of this money upon prices, to which we referred a little earlier. For it is well known that a change in the ratio of the amount of money to the amount of business transactions affects the level of prices. If money increases relatively, prices rise; if money decreases relatively, prices fall. This is because all the money in the community exchanges for all the goods. To illustrate this, at first, difficult point, suppose a pile of ten books and a pile, alongside, of ten dollars. Now suppose all the books to exchange for all the dollars. The price, obviously, of each book will be one dollar. Now suppose the pile of dollars to be halved. The price of each book will be fifty cents. Suppose *au contraire* that the pile of books is halved. The price of each will be two dollars.

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[2] Only fairly accurate as the accompanying chart shows. Banks possess the power to dilute the purchasing power of already-existing dollars by pyramiding credits. This power is used and serves to throw the ratio out of expected proportions. But this is a better mechanism than any we have hitherto had.

This is a simplified illustration of a very complex process. But if the idea of the books is expanded to include all the goods we use and the idea of the dollars is expanded to include all our media of exchange a very fair idea of what may be called the quantity theory of money (meaning that the purchasing power of money is relative to the ratio existing between its quantity and the volume of transactions) will be formed. If, without a change in the other, there is a sudden change in either quantity of goods and services sold or the quantity of purchasing power in current use, the general level of prices will rise or fall as the case may be. And in a business system depending, as ours does, upon price relations, it is highly desirable to have as great a degree of stability as can be achieved. For this reason a flexible currency, increasing and diminishing as the volume of business transactions increases or diminishes, is almost necessary. We have spoken before of proposals to obtain this result more efficiently, but we may here again refer to the great desirability of any force which tends toward stabilization. The so-called Fisher plan, based upon an entirely different money system, using index numbers of goods transactions, rather than a fixed weight of gold as the standard of money has many prominent advocates and deserves more extended discussion and study than it can be given here.[3] What we need to see is that, under the present system, a certain desirable flexibility has been achieved by basing currency upon discounted commercial paper. Further than this we need to understand that the manner in which this discounting is carried on has implications of the most serious sort for the economic system. For it involves also the collection and allocation of capital funds.

5. *The Collection and Allocation of Capital*

Here we come to the consideration of another of the bank's relationships to the business community. Commercial bank deposits do not invariably arise by the extension of credit. Funds may be transferred from debtor to creditor and redeposited in another bank. Or currency may be deposited for safe-keeping. In these cases, the bank is performing the function of the collection of capital funds. But most of this function is perhaps performed by savings banks and investment houses. Saving banks collect small sums, usually, and limit the time within which their return may be demanded by depositors. They can therefore invest in less liquid and more profitable securities than can commercial banks, which have to meet depositors' demands on the spot. Investment banks receive no funds in this way. They simply handle securities—the bonds and stocks of business enterprises mostly—for firms needing additional capital, bringing them into touch with available capital sources, these sources being, of course, the investing public.

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[3] For further discussion see Irving Fisher, *Stabilizing the Dollar* (Macmillan, 1920).

This is sometimes done on a pure agency basis, the bank acting for each of the principals, and sometimes on an "underwriting" basis, which means, simply, that the investment house guarantees the sale of the securities at a stipulated price. It is this function of collecting funds and placing them with investors which we have referred to as of such great significance in giving direction to industrial activity. For businesses do not ordinarily buy goods and pay wages and other costs with their own capital. They depend on getting it either from the sale of securities—stocks or bonds—or by borrowing from banks. For the building of plants and for the buying of equipment they usually depend upon the sale of securities, so that the placing function of the investment banker is crucial in determining the initial encouragement of the venture. Commercial banks, as a rule, are expected to furnish only operating capital on short-time notes.[4] Necessarily this capital is used only for buying materials and paying expenses for which the returns are quick. The notes must be paid as soon as the product made has been sold. But even here a refusal of credit is extremely serious and must result in the contraction or cessation of producing operations. So that the commercial banker as well as the investment banker has something of a veto power over the forms of business activity.

This is the mortgage department of a large mid-west bank. (Courtesy Cleveland Trust Company.)

It will be seen that it is of the highest importance that this encouraging and discouraging of business be carried on wisely, with a view to stimulating the production of much-wanted goods and to the restriction of the production of little-wanted goods. Our theory of control here is that much-wanted goods will be high in price and that less-wanted ones will be low in price. And so bankers are almost wholly guided in their allocation of capital funds by the prospects for the sale of the product to be made with the funds applied for by borrowers. If it seems likely that the business venture, after it has built its plant and installed its equipment, will be able to sell its goods at a price sufficiently high to pay expenses, including interest, the investment banker will be favorably disposed toward attempting to sell to the investing public the securities which will yield the funds for its beginning. And similarly, if the immediate market of a manufacturer seems favorable to his commercial banker, the funds for operation will be obtained without undue trouble.

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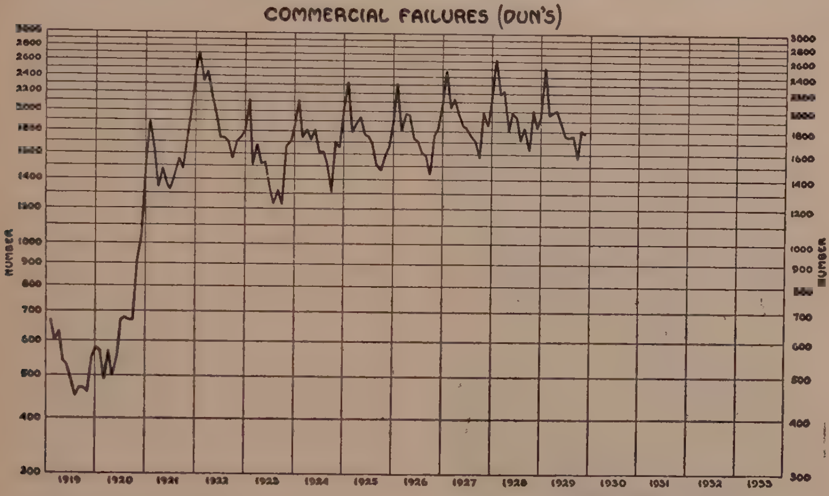
[4] A reservation has to be made concerning this orthodox explanation of commercial bank functions. In many instances the advance of funds is for uses of a fixed-capital sort, not really liquid and not for a short term. Under our arrangements this is not expected to happen but there is some reason for believing it to be frequent. The low liquidity which results is necessarily a source of weakness.



SOURCE: STANDARD STAT. CO.

We have made no remarkable progress in reducing the annual number of commercial failures. Social foresight in undertaking industrial enterprise is limited in two general ways: we lack the means for the clear forecasting of probable success, and we proceed by the free trial and error method in which anyone who can command the means may try his hand at business. The banker's veto might be more socially useful if it were guided by wider long-run criteria. (Data from Standard Stat. Co.)

There are two difficulties with this. First, well-paying ventures are not always socially desirable, and second, the anticipations of demand are often faulty. The first of these points needs no further discussion. Illustrations of socially undesirable ventures which have yielded high profits will occur to any reader. The second is almost equally obvious. It requires years sometimes to build and equip a plant. So that it is often impossible to say certainly whether at the end of such a long period, the public will show a sufficient avidity for the product to pay the necessary price. Even short forecasts of price movements are very uncertain, so that even commercial bankers, lending only for thirty or ninety days, often find conditions at the end of the period very different from their anticipations. The lessons here are that the criteria of price are, in their social aspects, often insufficient, as, indeed, our government recognized in war time when all large security flotations had to be authorized by a Capital Issues Committee. If for war purposes, it may be asked, why not for purposes of peace? The irregularity of price movements calls for all the machinery of stabilization we can devise.

6. *The Old Banking System and the New*

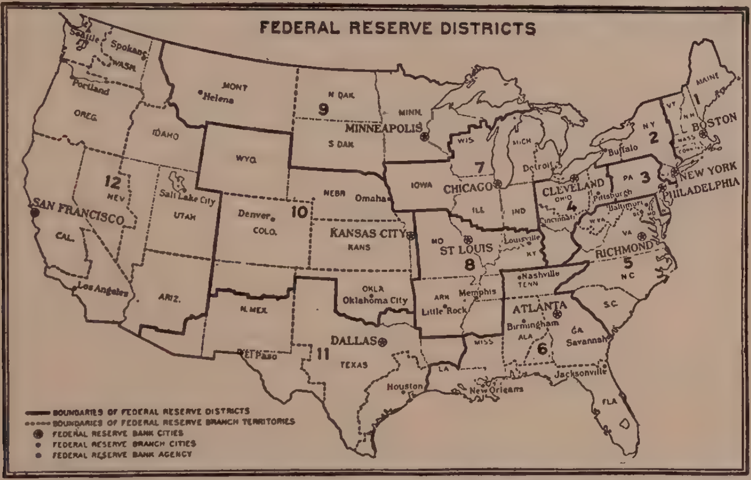
There are still these difficulties with the banking system. But there were many drawbacks to the old system which prevailed before the passage of the Federal Reserve Act in 1913. The new system makes currency more flexible, for one thing. Under the old system currency was based upon the national debt. Banks could secure paper currency only (with minor exceptions) by purchasing government bonds and depositing them with the government. This left the currency absolutely unresponsive to the fluctuations in the volume of the business transactions it had to effect. The new system, by basing currency on discounted commercial paper, immensely improved this situation, though this admittedly does not achieve a perfect correlation between currency and the need for it. If it did there would, of course, be no minor fluctuations of the price level, only those due to shifts in the amount of gold in the country.

The Federal Reserve Bank of San Francisco. (Courtesy F. R. Bank, San Francisco.)

For another thing, the new system, by pooling bank reserves, makes it unlikely that panics will occur, for with the reserves of all banks at the disposal of any one of them, such an immense fund is readily available that no call for currency on a single bank or all the banks in a single locality could possibly exhaust it. Recurring panics were one of the worst features of the old system and their obviation is a great gain. But also the new system has made possible a use of the banking function for direction and control which is at least potentially superior to the uses of this function under the old system. In order to understand this it is necessary to describe shortly the organization of the new system.

The country was divided into twelve federal reserve districts and in each of them a federal reserve bank was set up to be purely a bankers' bank, to rediscount, to perform functions of exchanging credits among banks—this cancellation and the payment of debit balances only, is called "clearing"—to issue currency, and in some measure to control broad financial policies. A map showing these districts discloses how well the country was divided. The governing idea of division was to have none so big that it could dominate the others, to "have regard to the convenience and the customary course of business" and yet to make each large enough to provide the minimum capital of $4,000,000 required by the act.[5]

All national banks are required to join and state banks may join if they wish. Member banks are required to subscribe to the capital stock of the reserve bank in their district to an amount equal to a theoretical six per cent of the member banks' capital and surplus, three per cent of which is actually subscribed. The other three per cent might be required but probably never will be. The control of the federal reserve bank is by the principle of "one bank, one vote." Also all the banks in a district are grouped in three classes, large, small, and medium. Each of these groups elects two directors, one of whom is called a Class A director and the other of whom is called a Class B director. Each Class A director must be a banker. Each Class B director must be elected from the non-banker community and usually he is a business man. To these six, three other directors are added by appointment of the Federal Reserve Board in Washington. And one of these latter is designated as Chairman of the board. In this way some representation of other than banking interests is secured.



The map shows how the country has been divided into financial districts for purposes of the Federal Reserve System.

The Federal Reserve Board at Washington consists of the Secretary of the Treasury and the Comptroller of the Currency, ex officio, and six other persons whom the President appoints to hold office for ten years. The board is also assisted by an "advisory council" of twelve members appointed by the boards of directors of the twelve federal reserve banks, which meets with the board at least four times a year.

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[5] For a further discussion see E. W. Kemmerer, *The ABC of the Federal Reserve Act* (Princeton University Press, 1918).

Of this system as we have briefly described it Professor Kemmerer says: "The appointment by the Federal Reserve Board of three of the nine directors of each of the federal reserve banks and the appointment by each federal reserve bank of a member of the advisory council federate together the twelve banks under the reserve board and give a common knowledge and unity of purpose." [6]

We see then that, if it seemed to its directors desirable to control business, such a system could go very far. With its control over the general discount situation, and the position of moral leadership which its eminence gives, it could have considerable influence in encouraging or discouraging certain kinds of activity, and so in directing the course of industrial development.

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[6] *Ibid.*, p. 34.

CHAPTER 21

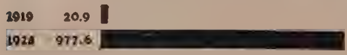
BIG BUSINESS, SPECULATION, AND THE BANKING SYSTEM

1. *Big Business in Industry and Banking*

The merger movement of recent years has advanced at an unprecedented rate. We have already explained the reasons for combination, the advantages and dangers it holds, the forms it takes and the means for its control. But not much has been said of the special ways in which it affects the financial system. The Federal Reserve Act was passed before the recent era of startling change; more important still, it embodied ideas of an even earlier time. Fear of the centralization of money-power in Wall Street, belief in the efficacy of competitive business, were still dominant at the time of its passage. One of the central problems of its framers was to secure safety with decentralization. So the twelve districts were set up, each with its own organization, but each able to call on the others at need. And so the directors of the banks were divided into classes according to the size of the institution represented. So also the banks were made private rather than public, to be regulated but not owned by the government. In a sense the system was out of date before it began; but there was little criticism of it because of that since it was immensely better than the system for which it was substituted, or, perhaps it is better to say, which it supplemented, for much of the old structure was retained. Yet the problems it faces now with uncertainty and hesitation arise largely because of the confusion of its purposes and the inadequacy of its powers.

Ways have been found to centralize the financial power of the country in New York just as they had been found under the old arrangement; competition after the old pattern has ceased to distinguish business. The thing which it was hoped to prevent has happened; the system of business it was meant to sustain seems in a fair way to disappear. The unprecedented scale on which organization is carried out at present and the size of the capital issues of the merged firms is a new phenomenon. The banks have met the situation by mergers and capital issues of their own until they too have assumed a new gigantic size. The relations between big business and big banking have grown so intricate and so interlocking that it is frequently said of well-known corporations that they are this or that bank's firms; and conversely some immense businesses have, through necessity, created functions within their own organizations which used to be thought of as belonging exclusively to the banks. One of the best-known and most-rapidly-growing of these operates in connection with installment selling.

The acceptance corporation which is so frequently now a subsidiary of manufacturing concerns, is merely a device for extending credit to customers in order to enlarge the market. But the creation of credit used to be a banking function. Formerly if a firm allowed its customers credit the banker was called on, either directly or indirectly, to furnish the funds. Now these corporations frequently issue their own securities and are quite independent of bankers. Also many firms have learned that they can free themselves from banker control even for commercial credits. They can sell limited-dividend preference shares or bonds and secure their funds in this way. Frequently too they build up large surplus reserves against seasonal requirements and so escape from borrowing. This last is of considerable significance. A firm which needs, say, fifty millions for two months of the year, may provide itself with the funds by issuing securities and then may itself lend the funds in the money market for the other ten months; or it may regularly purchase the securities of other corporations, hold them until the funds are needed, and then dispose of them. As businesses have grown bigger, also, and have gained a better statistical knowledge of the rhythms of their trade, they have learned to expect recurrent slack times. These they may guard against by setting aside surplus reserves. But these surpluses are never idle. They may be loaned at call; they may be invested in readily realizable securities.



Installment selling has increased remarkably in the distribution of automobiles. The acceptance corporation device has facilitated the deferred payment plan by increasing safety to sellers and reducing changes to buyers. There is difference of opinion as to whether there is social benefit involved. The chart shows the growth (in millions) of installment sales by General Motors. (Based on official data—General Motors Corp.)

On the whole, the extent of these practices is a serious embarrassment to attempts at control on the part of a Reserve system which has only power to change the rate for commercial paper rediscounts or to buy and sell in the open market certain very limited classes of securities;[1] there is a problem here to which we shall need to return.

2. *Security Exchanges*

A security exchange—a stock market—is a place where professional dealers meet to buy and sell just as they would meet to buy and sell evidences of the ownership of produce. Here prices are fixed. The exchanges are private associations of traders subject to certain public regulations. They decide—or their agents, usually an elected board of governors, decide—what securities shall be admitted to trading. Private investors cannot buy and sell there except through brokerage firms which possess memberships and which act as agents in the transaction. So that an individual who wishes to buy or to sell necessarily approaches the market through one of these member firms.

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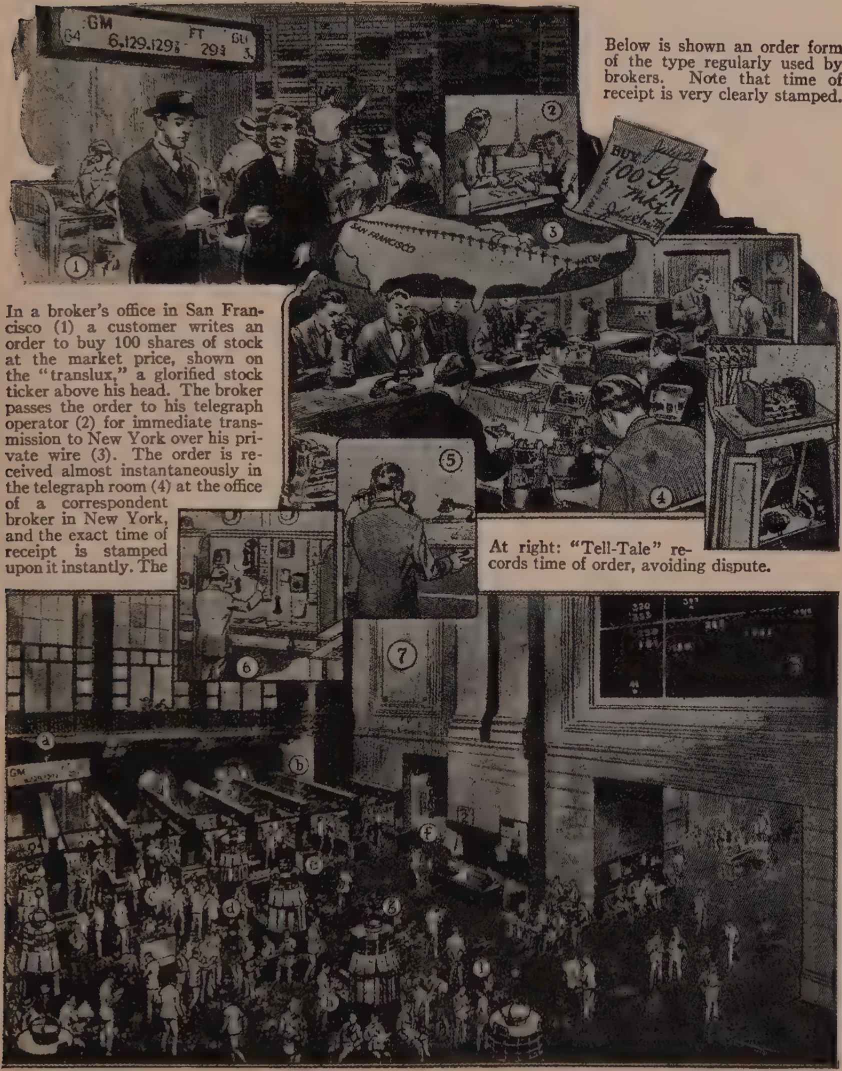
[1] Such as government or municipal bonds, bankers' acceptances, and trade acceptances.

THE STOCK MARKET



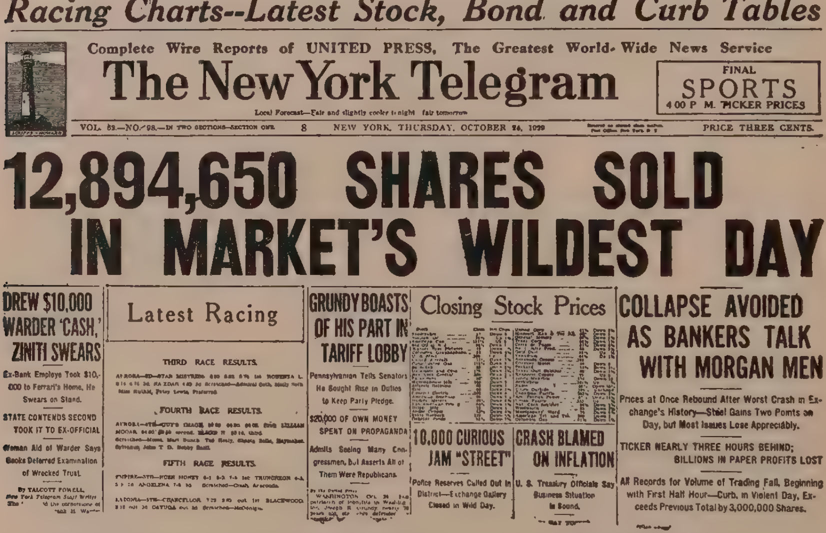
Below is shown an order form of the type regularly used by brokers. Note that time of receipt is very clearly stamped.

At right: "Tell-Tale" records time of order, avoiding dispute.

Above: (a) "trans-lux" ticker; (b) broker's booth; (c) the ticker operator; (d) conducting a sale; (e) (g) trading posts; (f) call money desk; (h) messengers; (i) dealer in "odd lots."

In a broker's office in San Francisco (1) a customer writes an order to buy 100 shares of stock at the market price, shown on the "translux," a glorified stock ticker above his head. The broker passes the order to his telegraph operator (2) for immediate transmission to New York over his private wire (3). The order is received almost instantaneously in the telegraph room (4) at the office of a correspondent broker in New York, and the exact time of receipt is stamped upon it instantly. The telegraph operator turns over the order immediately to an order clerk (5) who establishes telephone contact with the broker's booth (6) on the floor of the New York Stock Exchange (7) merely by pressing a button. When the clerk in the booth (b) receives the order, he signals the broker, who is on the floor of the exchange, by means of the electric annunciator board shown in upper right hand corner of picture. The broker purchases the stock required at one of the posts (g) on the exchange floor. Listed stocks are divided among twenty-nine such posts, about forty stocks to a post. Confirmation is transmitted by a reverse process back to San Francisco, the whole transaction often occupying no more than a minute or two. (Courtesy *Popular Science Monthly*.)

Speculation takes place in stocks and bonds just as it does in wheat or corn and serves, in a more limited way, the same purpose. It is sometimes defined as buying and selling in anticipation of changes in price. Profits are made when the anticipation has been made correctly; losses result from incorrect anticipation. The justification for speculation in produce markets is that professional traders, with an expert knowledge of conditions governing the supply of and the demand for a product, buy or sell in anticipation and so prepare the consuming and producing public for what is about to happen.



Racing Charts--Latest Stock, Bond and Curb Tables

Complete Wire Reports of UNITED PRESS, The Greatest World-Wide News Service

The New York Telegram

FINAL
SPORTS
4:00 P. M. TICKER PRICES

Local Forecast—Fair and slightly cooler to-night fair tomorrow

VOL. 62.—NO. 98.—IN TWO SECTIONS—SECTION ONE 8 NEW YORK, THURSDAY, OCTOBER 24, 1929 PRICE THREE CENTS.

12,894,650 SHARES SOLD IN MARKET'S WILDEST DAY

DREW $10,000 WARDER 'CASH,' ZINITI SWEARS

Ex-Bank Employe Took $10,000 to Ferrari's Home, He Swears on Stand.

STATE CONTENDS SECOND TOOK IT TO EX-OFFICIAL

Woman Aid of Warder Says Books Deferred Examination of Wrecked Trust.

By TALCOTT POWELL,
New York Telegram Staff Writer

Latest Racing

THIRD RACE RESULTS.

FOURTH RACE RESULTS.

FIFTH RACE RESULTS.

GRUNDY BOASTS OF HIS PART IN TARIFF LOBBY

Pennsylvanian Tells Senators He Bought Rise in Duties to Keep Party Pledge.

$20,000 OF OWN MONEY SPENT ON PROPAGANDA

Admits Seeing Many Congressmen, But Asserts All of Them Were Republicans.

Closing Stock Prices

10,000 CURIOUS JAM "STREET"

Police Reserves Called Out in District—Exchange Gallery Closed in Wild Day.

CRASH BLAMED ON INFLATION

U. S. Treasury Officials Say Business Situation Is Sound.

COLLAPSE AVOIDED AS BANKERS TALK WITH MORGAN MEN

Prices at Once Rebound After Worst Crash in Exchange's History—Steel Gains Two Points on Day, but Most Issues Lose Appreciably.

TICKER NEARLY THREE HOURS BEHIND; BILLIONS IN PAPER PROFITS LOST

All Records for Volume of Trading Fall, Beginning with First Half Hour—Curb, in Violent Day, Exceeds Previous Total by 3,000,000 Shares.

The headline indicates the public interest in stock prices during the 1929 debacle. This was not the wildest day, however; a few days later more than 16 million shares changed hands. (From *N. Y. Telegram*, October 24, 1929. Used by permission.)

The professionals, being informed, will bring a preponderance of weight to the buying or selling side of the market. Thus a rise in price is a warning of a coming shortage; a fall in price advertises a probable surplus. Before the situation actually occurs consumption is enlarged or restricted and production is stimulated or slowed down. The results of shortage or surplus are thus eased and every one is warned in advance. Fluctuations of prices are also less than they would otherwise be if there were no professional group quick to register in buying or selling the slightest favorable or unfavorable indications for the future.

All this is, of course, a sort of ideal justification. It assumes a considerable knowledge among the professional traders which they may or may not have; and it assumes a reaction to facts which may or may not take place. What we have said concerning prices must have made it clear that very complex forces govern them. Attempts to forecast their future movements, even by the most expert of statisticians, have never been uniformly successful; there is some reason for doubting on these grounds, therefore, whether so great a benefit comes from professional speculation as is sometimes claimed. Also it is well enough known that regular traders not infrequently act rather against than for the public interest. It is their business to make a profit from changes in prices; they are not governed by a social duty to anticipate correctly the economic conditions of the future. Indeed, there are numerous ways of making profits which are not contemplated in the ideal explanation of their function. It is possible, for instance, to start rumors and to gain thereby; it is possible to pool together and simulate shortages where none exists. These and other malpractices of exchange habitués have led to a certain suspicion of their customs and, at times of serious crisis, to suspension of trading. At present the Grain Futures Act, which is administered by the Department of Agriculture, has the effect of regulating trading in the cereals.

Theoretical questions, also, have been raised concerning the social value of stock as compared with produce markets. It might be argued, it is said, that some purpose is served by professional trading in produce, but no such purpose can possibly be served by stock dealing. The supply of stocks cannot be enlarged; stock certificates are not things which can be consumed. The whole business is a gambling device, pure and simple.[2] Aside from this theoretical ques-

Looking down at the exterior of the New York Stock Exchange building. This is the "Wall Street" which has stood as a symbol of the "money power" to generations of Americans. It has furnished the theme of many a windy political speech as well as numerous economist's monographs. In what sense this is an important ganglion in our system, we have tried to explain in this book. (International Newsreel Photo.)

[2] Professor Henry Clay is one of those who argue this way: "The last kind of specula-

tion, another issue has been raised. The public, in increasing numbers, has interested itself in the stock market. The most unlikely individuals occasionally take a flyer there, having been given a tip of perhaps doubtful authenticity. Some amateurs habitually use their savings in this way, following their own or others' hunches. There is even published in some newspapers daily advice to would-be speculators. The form which this takes, and the way in which it is followed, reminds one of nothing so much as the tipster sheets which forecast racetrack winners. The "street" has become, for many people, simply a slightly more respectable gambling device than ever was invented before. About this propensity for gambling and about the moral effects involved we are not concerned; it will be seen, however, that the social justification of speculation depends entirely upon the earnest attempt of speculators to become informed and to forecast honestly coming events, so that the weight, which is a necessary for future eventualities, is thrown on the right side of the market. We are not willing to agree that stock-speculation cannot possibly serve any good purpose; but there are certainly some reservations to be made to the usual arguments used for justification.

It is true that stocks may, through brokers, be bought outright, paid for, and put away as an investment. But only a minor fraction of the daily sales on the exchanges is of such a sort. Usually stocks are bought or sold on margin, which means that only a small percentage of the funds involved is advanced by the buyer or seller. The client, let us say, deposits a few hundred or a few thousand dollars with a broker, thus opening an "account." Thereafter the broker carries out his instructions for trading (often done on advice of the broker) by "hypothecating" the securities dealt in. If stock is bought, for instance, the broker uses it as collateral for a loan in the call money market, paying the interest demanded and charging it on his books to the customer for whom he is acting as agent. One may not only "go long" or buy on margin in this way when he believes an advance in the price to be imminent; he may also "go short" or sell, without actually owning.[3] In this case what he sells is merely a promise to deliver. The hope is that what is "sold" may fall in price so that purchase for delivery may later be made at a lower level. The result of this is that one may act in anticipation either of a rise or a fall in the price. The broker, in either case,

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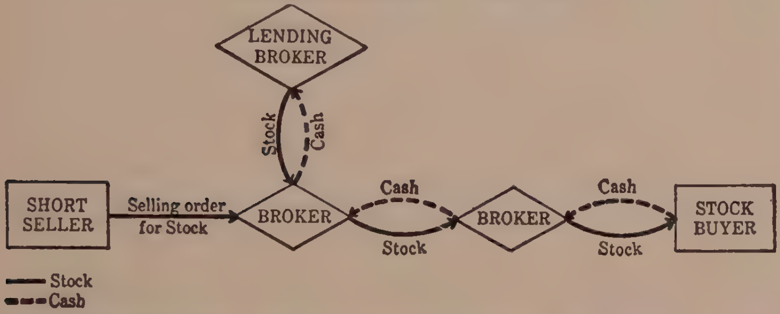
tion, which would seem to be illegitimate, is speculation that cannot have the effect, which legitimate speculation has, of adjusting supply to demand. On the produce exchanges supply is not a fixed amount, but a flow that varies in volume; by raising and lowering prices speculators check and encourage consumption, and in that way secure that supply shall be averaged from one period to the next, with the result that price-fluctuations are lessened. This action is necessary, only because the supply is an irregular flow; if the supply were a fixed amount, there would be no need; and therefore no social justification, for speculation." *Economics for the General Reader*, 86–7.

[3] Brokers have mutual arrangements for borrowing stocks sold short. The customer really makes a contract to deliver a certain number of shares at an indefinite future date. But the broker must make sure of something to deliver when that time comes.

watches his accounts. So long as any customer is "on the right side of the market," all goes well. Eventually he may close out and take his profit. But if he is on the wrong side his "margin" may be wiped out. If he cannot or will not risk more, the broker will close out the account to protect himself, since it is he who is responsible to the banker for repayment of the loan. "Long" margins are exhausted when the price falls sufficiently so that what has been borrowed, together with the customer's advance, will not cover the sum realizable on the sale of the stock.[4] "Short" margins are exhausted if the price should, instead of falling, rise by more than the sum advanced by the customer.

Diagram Illustrating a Short Sale



The short seller orders his broker to sell stock he does not own, expecting a decline in price and an opportunity to buy back at a lower figure. The sale is made on the floor of the exchange to another broker representing the security buyer. The seller's broker then borrows stock from another lending broker, and delivers it to the buyer's broker. The lending broker happens to be carrying this stock for a customer. The lending broker makes a loan of the stock against the deposit of cash which the short seller's broker has received from the buyer's broker. (From H. P. Willis and J. T. Bogen, *Investment Banking*, Harpers, 1929.)

The opportunities in this system for quick profits are attractive.[5] Add to this the fact that only a small percentage of the sums actually involved in the transaction have to be found by the inventor and the attraction is doubled. On a thousand dollars, one can attempt to gain the accretions in price, over a given period, of perhaps ten thousand dollars' worth of securities, depending on the percentage of margin which his broker may demand. Anyone, these days, can hear of a stock which is sure to gain or lose several points almost immediately. And on such slender assurance as this many of the transactions are initiated. This is the real picture which may be contrasted with the ideal one of a preponderance of wisdom brought to bear in central places so that prices shall be beneficially affected.

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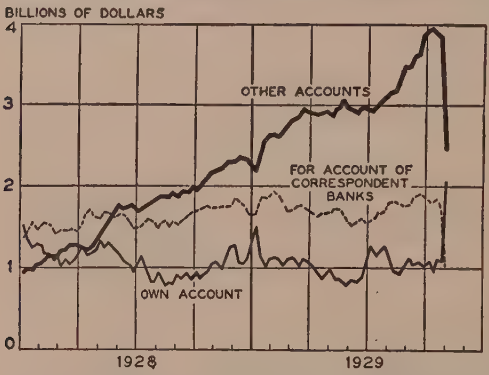
[4] These customers' advances or margins vary upward from 10 per cent of the price of the securities dealt in. In troubled times brokers try to keep margins high.

[5] There may be equally quick losses, of course, but each speculator risks this in the balance against his judgment.

3. *Security Exchanges and the Banks*

We have already spoken of the tendency of businesses to alter their method of securing funds from bankers and to obtain them instead by the sale of securities. These are dealt in on the stock exchanges and have enormously increased the number and kind of securities available for speculators both professional and amateur. To the extent to which these are bought and held for margin accounts, their owners have very little probable interest in the concern itself and readily yield their proxies to more interested individuals. This tendency of ownership to divorce itself from responsibility has been severely criticized.[6] It has on the other side been argued that the existence of this series of institutions has made for a diffusion and therefore for democracy in ownership, an argument which has obvious weaknesses, since it seems easily demonstrable that the ownership is purely incidental to another activity, that of getting a profit out of price changes. If it could be done as well without accepting ownership, the usual speculator would be just as greatly attracted. Indeed so-called "bucket shops" are frequently uncovered which operate purely as gambling offices, merely using stocks instead of horses for betting purposes.



Loans to brokers and dealers in securities placed by New York City banks (1) for own account, (2) for out-of-town correspondent banks, and (3) for other lenders. Note the relatively large proportion for "other accounts." Note how it dropped off when the "crash" came in 1929. And note how "own account" loans had to be extended to meet the sudden deficit. (From *Monthly Review*, F. R. Bank, N. Y., November 1, 1929.)

So long, however, as ownership is not actually and wholly divorced from speculation, the banks are seriously involved in the advancing of funds to brokers' customers. It is this, indeed, which enables speculation on the current scale to continue. In what has been called the "speculative fever" of recent years the amount of brokers' loans has risen to what formerly would have been incredible amounts; and a real question has arisen in the minds of many persons whether this kind of paper might not elbow other kinds out of the rediscounting privilege. Is it true that other business activities, such as "real" production by farmers or manufacturers, are shut out of credit facilities by the speculators' dance in Wall Street? This question has tormented a Reserve Board patently unwilling to take a definite stand. On the whole, however, the Board has seemed, by its management of rediscount rates and open-market operations, to view speculation with disquiet and has taken an unprecedented stand against the commercial paper which arises from these transactions, even issuing solemn warnings to its member banks of measures to be taken if brokers' loans were not reduced.

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[6] By Professor W. Z. Ripley, for instance, in *From Main Street to Wall Street.*

One strange feature of this attitude on the part of the Board is that it is a reversal of former ones. Responsible Reserve officials have said repeatedly and plainly that they understood their duty to be not to say "what kind" but only "how much" credit should be issued; and that it was no part of the Board's functions to influence prices or to control business. Such statements as these are obviously attempts to bring the Board's policy into line with the traditional American attitude toward the relations of government and business. Yet the situation of the Reserve system is such that its actions affect business policy and prices whether or not its members believe it ought to; it coördinates the financial system; and the financial system is the greatest single agency in coördinating business. It therefore lies across the very center of industrial interrelationships. To say that its policies do not affect the conduct of industry is to deny that it does what it cannot possibly avoid doing. It would not be important to note the disparity between what is done by the Board and what its officials say they intend if it were not especially necessary at this stage of transition to proceed with foresight. Confusion in such a case as this is disquieting because it reveals our lack of definition as to aims.

4. *Banking Policy*

If it is true that corporations have adopted a new way of obtaining funds by security issues rather than loans, this does not mean that independence from the banking system has been won. Each business, for itself, may have secured greater freedom than it had before. It may not be necessary to proceed with so single an eye to pleasing the officers of certain banks who may be essentially ignorant concerning technical operations and only interested in the safety of immediate ventures. So far as this is true, it is perhaps a step in advance. Yet the provision of funds in general is still a banking function, though the procedure may have been altered. When securities are put on the market and made the basis for commercial loans, these loans are still made by banks, though their clients may be other bankers or speculators rather than producing corporations. The commercial paper which results is not rediscounted by the Reserve banks; but the use of funds in this way forces an increased rediscounting of those types of paper which are admissible to rediscount, thus securing the same effect of inflating credit. When a broker secures a loan by hypothecating a bundle of miscellaneous securities, the business itself ceases to be the bank's client and the stockbroker assumes the relationship; but the stocks could not be issued and disposed of if loans on them were to be refused. An objection to brokers' loans is partly an objection to this way of providing funds for industry.

One objection which banking theorists have made to this method is that

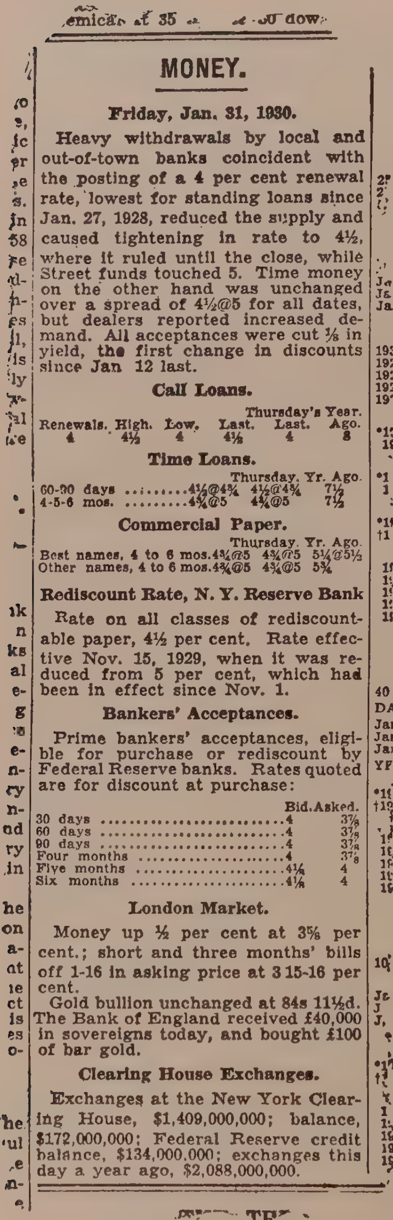
Among the institutions of industrial life, banking is fitted out with the most luxurious trappings. Note the hand-wrought doors, the mural in the background and the wide sweep of space within which the light falls softly on polished stone and metal-work. The whole establishes an atmosphere not unlike that which men have always tried to create for acts of worship. Judging by the outward show, we are not far, here, from a central power in our civilization. Few educational or governmental enterprises can command comparable resources for environing their functions. (A Margaret Bourke-White Photo.)

it makes it impossible for a rediscounting agency to discriminate among the industries whose paper is offered as collateral for notes, since the process is more roundabout than the one it supplanted. But the Board has reiterated its intention not to discriminate among industries. There is a confusion here which no explanation has as yet cleared up. It is true that an excessive amount of brokers' loans might make it difficult for those businesses to get funds which have not yet adopted the new way of financing; but this merely raises a question as to whether the adoption of the new means ought to be hindered or whether it ought to be favored.

It has sometimes been suggested that the whole difficulty might be obviated by certain changes in the law and the policy of the Reserve Board. If, instead of confining itself to negative objections, the Board should admit its responsibility for control, or, if it should be directed by law to assume responsibility, it might be possible to better the situation in a number of ways. Instead of general handling of the rediscount rate, for instance, particular discriminations might be practiced. An industry which showed signs of overactivity might be restrained by raising the rate on its paper; or it might be encouraged by lowering the rate if it seemed to need stimulation. Whether this paper were offered as collateral by a bank whose client was the firm itself or by one whose client was a broker offering the firm's securities would then make no difference. The trouble now arises because many brokers' loans are used for carrying on stock-market operations as businesses. Obviously, from a social point of view, security exchanges are nothing but facilitating mechanisms. In this sense they should not be thought of as industrial businesses any more than money, which is a medium of exchange, should be thought of as a good. The difficulty with this is that as a matter of fact every one who deals on the exchange is a business man; and it does little good to distinguish between the exchange and those who use it. Nevertheless we have to make some such distinction because, as we have seen, there is a social mechanism here which is both praised and condemned—praised because of a certain usefulness, condemned because it is subject to abuse. Many economists have tried to distinguish between "legitimate" and "illegitimate" trading. By legitimate they mean speculation of an informed, professional sort; by illegitimate they mean gambling on hunches. But no way has ever been discovered to separate the two in practice. So that when a question arises as to the amount of the total of brokers' loans which represent the one as contrasted with the other there is no clear line which can be drawn; and such an agency as the Federal Reserve Board, when faced with the fact of huge credits allocated to speculation has to fall back on what is more or less a guess; and can only warn banks and bankers when the total of these loans seems too high in proportion to the other classes of commercial paper. It is all very unsatisfactory. It is undesirable that any large part of our credit facilities should be used for hoisting the market up or pulling it down just so that easy profits may be made. But it is equally desirable that financing business by security issues rather than loans should be facilitated by a free and open exchange and by holding open the rediscount privilege to paper based on these securities.

In spite of all that can be said against participation by the public in stock exchange trading, it seems doubtful if any limitation of such participation would work well. If anyone who can command funds prefers to risk them in stock speculation rather than in some other sort of investment, limitations on the freedom of the market for securities is a doubtful kind of compulsion. It should be a matter of indifference what happens to the individual. That is no concern of the government. The object of solicitude should be the mechanism itself. Gains or losses in American prosperity are something in which every one has a right to share; and the security market is a good way of assisting in this because it is free and open. It is much more desirable that the market should be protected from manipulators, pool operators, and rumor mongers, than that the public should be kept out. It would be much better if attention were centered on the apportionment of funds among various industries. This cannot, however, be accomplished without change not only in the law, but in our notions of industrial control.

There is also the other question of the currency to be considered. Not only have officials of the Board said that they had no intention of controlling the direction of business but also that they could not and would not control



MONEY.

Friday, Jan. 31, 1930.

Heavy withdrawals by local and out-of-town banks coincident with the posting of a 4 per cent renewal rate, lowest for standing loans since Jan. 27, 1928, reduced the supply and caused tightening in rate to 4½, where it ruled until the close, while Street funds touched 5. Time money on the other hand was unchanged over a spread of 4½@5 for all dates, but dealers reported increased demand. All acceptances were cut ⅛ in yield, the first change in discounts since Jan 12 last.

Call Loans.

Renewals.	High.	Low.	Last.	Thursday's Last.	Year. Ago.
4	4½	4	4½	4	8

Time Loans.

		Thursday.	Yr. Ago.
60-90 days	4½@4¾	4½@4¾	7½
4-5-6 mos.	4¾@5	4¾@5	7½

Commercial Paper.

		Thursday.	Yr. Ago.
Best names, 4 to 6 mos.	4¾@5	4¾@5	5¼@5½
Other names, 4 to 6 mos.	4¾@5	4¾@5	5¾

Rediscount Rate, N. Y. Reserve Bank

Rate on all classes of rediscountable paper, 4½ per cent. Rate effective Nov. 15, 1929, when it was reduced from 5 per cent, which had been in effect since Nov. 1.

Bankers' Acceptances.

Prime bankers' acceptances, eligible for purchase or rediscount by Federal Reserve banks. Rates quoted are for discount at purchase:

	Bid.	Asked.
30 days	4	3⅞
60 days	4	3⅞
90 days	4	3⅞
Four months	4	3⅞
Five months	4⅛	4
Six months	4⅛	4

London Market.

Money up ½ per cent at 3⅝ per cent.; short and three months' bills off 1-16 in asking price at 3 15-16 per cent.

Gold bullion unchanged at 84s 11½d. The Bank of England received £40,000 in sovereigns today, and bought £100 of bar gold.

Clearing House Exchanges.

Exchanges at the New York Clearing House, $1,409,000,000; balance, $172,000,000; Federal Reserve credit balance, $134,000,000; exchanges this day a year ago, $2,088,000,000.

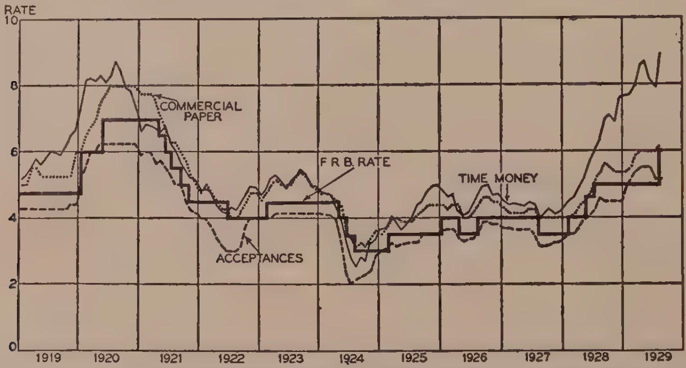
From *N. Y. Times*, February 1, 1930.

prices. Such a statement is true only in a most limited sense. For any body with power to dictate as to the rediscounting privilege and the management of the gold reserve, exercises all the time a control over prices—not directly over particular prices of particular goods, but over the general level of prices. Here again there is a real question whether the more particular control would not be superior to the general one. For what appears to be general may very well have particular effects. For instance the farmers charge that a tightening of rediscount rates at harvest season threw the burden of falling prices on them rather than on others at the beginning of the depression of 1920. The Board was under attack for years following this crisis on just these grounds.

It sounds to the uninitiated somewhat as though inflation or deflation were automatic under our arrangements for currency expanded or contracted on a basis of commercial loans which presumably reflect in their total the need there is for a medium of exchange at any one time. A currency perfectly adjusted to the changing volume of transactions it is to effect would not influence prices one way or the other. But this is a very elementary view of the situation. The handling of the gold reserve, open-market operations, and the incidence of encouragements to discount, made through bankers, make all the difference in the world not only to the general price level but to many particular prices. The real question is whether it should be done by a body which pretends that it has no right to do any such thing, and which, when it finds itself criticized, falls back on the argument that it had no discretion. But discretion is exactly what it uses. The alternative would be a frank recognition that nothing which the Board does is done automatically or without discretion and the use of judgment, and nothing therefore is a matter of public indifference. It is supremely the public's business. But no one ought to do it who believes that he is not doing it or is willing to pretend that he is not responsible.

The points which are particularly relevant concerning banking policy at the present time are, on the whole, subject to considerable confusion and argument. No one appears to know whether a high total of brokers' loans is a dangerous sign or whether it is not. What part of it represents simply a changed method of providing business funds and what part of it represents funds tied up in purely gambling activities no one can tell. Only an analysis of the type of securities hypothecated by borrowing brokers could reveal the facts; and no such investigation has been, or, apparently, could be made. The Board acts as though it were fairly certain that this method of borrowing is bad. One piece of evidence would seem to support this view. The call money rate in New York remains quite consistently above any rate which can be paid or need be paid by a borrowing business. Nine, ten, even twenty per cent is a rate for funds which no one will pay who does not expect a greater return than usual business profits. Yet the rates for loans at call have run in this range for considerable lengths of time within the past few years. This, alone, would seem to justify some limitation on speculation since it makes it obvious that these funds are being used for gambling rather than for industrial development. If all the Federal Reserve Board can do is to exercise a blanket power, restraining good as well as bad activities in the call money market, this must be done. And most students of banking agree that the Board is right in this attitude.

Not only gambling on the exchange is indicated in these high rates for money but also a draining of funds away from the rest of the country. A country bank, or a bank in a small city, for instance, will prefer to send its funds to be loaned in security markets at call rather than to loan them for considerable periods in their home localities. So long as the call money rate remains abnormally high this situation will continue and other activities in the country may be starved of funds for the benefit of the security market. Some sort of control beyond that which is exercised at present is called for. It needs to be less general and more particular; it needs to be done by an agency which is not afraid to accept its responsibility and to act decisively; and it needs to be carried out with a notion of the function of financing in the industrial process as well as a clearer view than we have at present of what it is we expect from the businesses of our industrial system.[7]



This chart shows the movement of rates for sixty to ninety day stock exchange time money, 4 to 6 per cent commercial paper, ninety day banker's acceptances, and the discount rate of the Federal Reserve Bank of New York. It is especially interesting to note how the discount rates of the Reserve bank have lagged behind other rates. It would appear that discount rates are changed only on severe provocation and after the need for change has become very great. (From the *Monthly Review*, F. R. Bank, New York, September 1, 1929.)

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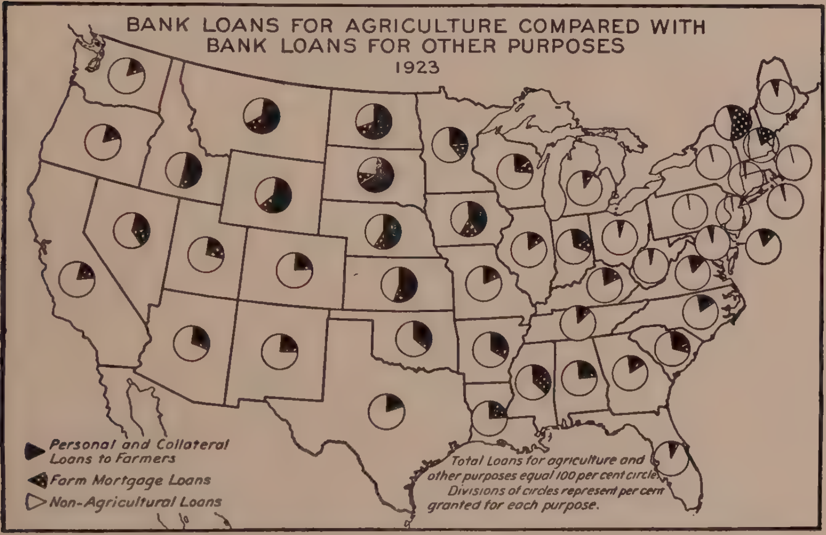
[7] Further discussion of these problems may be found in the *Proceedings* of the Academy of Political Science, xiii, January, 1930.

CHAPTER 22

AGRICULTURAL FINANCING

1. *Farmers' Access to Ordinary Credit Facilities*

Farmers have never been entirely shut out from the possibility of obtaining ordinary bank credits from the banking institutions within their districts. There are many thousands of country banks in the United States whose main clientele is found among farmers. But the credits available have never been of the right sort for farmers just because these banks have always been linked up with the rest of the financial system. The banks themselves have suffered. Frequently, at periods of depression in farming, they have found themselves loaded with "frozen credits," that is, loans which farmers could not discharge although the collateral for the loans was essentially sound. This comes about in a way not difficult to understand. In times when prices for farm products and for land are high, bankers make loans to farmers on the security of property mortgages. But if, before the loan is discharged, depression comes on with falling prices and a stagnant

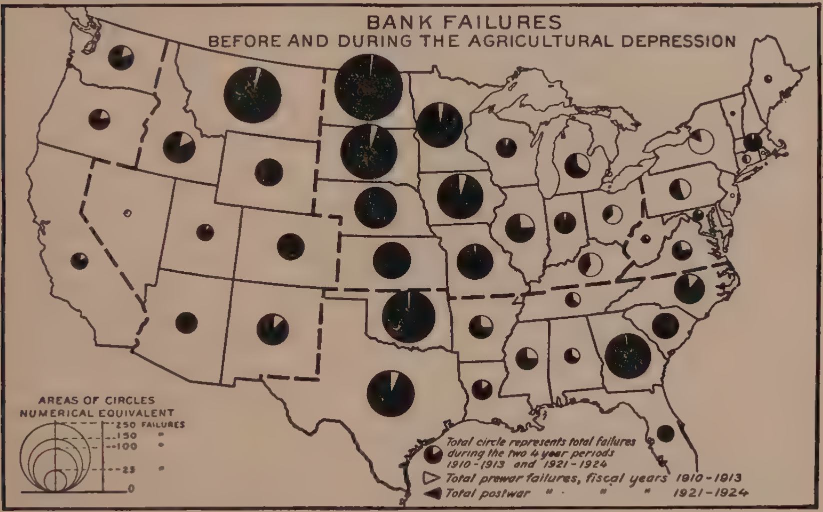

BANK LOANS FOR AGRICULTURE COMPARED WITH
BANK LOANS FOR OTHER PURPOSES
1923
Personal and Collateral Loans to Farmers
Farm Mortgage Loans
Non-Agricultural Loans
Total Loans for agriculture and other purposes equal 100 per cent circle. Divisions of circles represent per cent granted for each purpose.

Note the variation in the percentage of available credit which is allowed to agriculture in the various states. (Courtesy Bureau of Agr. Economics.)

market, the farmer cannot sell his product at anything like expected prices and fails therefore to meet his debts. Ordinarily in these circumstances foreclosure would result and the bank would be paid out of the proceeds of a forced sale; but even though the loan may have been a conservative one amounting to some 60 or 75 per cent of the market price of the property, prices eventually may have fallen so low that even this amount could not be realized. It would, under these circumstances, be useless for the bank to foreclose; and there is no alternative to continued renewal of the loan. Eventually the situation may become sufficiently extreme to cause the bankruptcy not only of the farmer but also of the bank. This, and like difficulties, have beset the country banks so frequently as to make it necessary for them to exercise extreme caution.

The country bank always has other alternatives for the use of whatever funds may be at its disposal. Each has one or more "correspondent" banks in urban centers with which funds are exchanged. Normally this exchange operates to build up loanable funds in country districts during the harvest seasons when the demand is greatest and to form an outlet for the surplus funds of country districts during other seasons of the year. Actually, however, it works one way better than the other, because the exchange depends partly upon the rate of interest being higher in one market than the other, and partly on the contrasting liquidity of the loans. Farming in general cannot be compared with other industry in general either so far as profits or liquidity are concerned. Naturally therefore there is a tendency for funds from the whole country to flow to the urban centers and to remain there. A certain check on this tendency is furnished by the fact that most of a country banks' depositors are normally farmers to whose demands for loans attention has to be paid for fear of their alienation. But outside of this, the stronger pulls are toward the city. This attraction is intensified also in periods during which call money rates are high. This means simply that short-time loans, payable on demand, command a high rate of interest. These loans are most frequently made to stock or produce market brokers who act for clients operating in the central exchanges. Speculation offers the attraction of larger possible profits than most other kinds of investment; and speculators are therefore willing to pay interest rates with which others cannot compete. If farming is less attractive as a loan market than other industry, it is even less so than speculation.

All these influences have operated of late to restrict the volume of funds available to agriculture; and often, even, to draw them out of the country districts into urban centers. This is not only true of funds available for loans by country bankers; but also of whatever profits farmers are able to make. If a farmer, in a good year, finds himself with a surplus of cash which he does not wish to leave on deposit at his bank; or if he has, after operating his farm for a period of years, sold it at a good price, he naturally looks around for a safe but profitable investment. If farming were a corporate business in whose shares he could invest a little here and a little there, and if its general profitableness were at all comparable with that of industrial corporations, he might invest his savings in agriculture. But there is the double difficulty that he has to buy *a farm*, not shares in a farming business where his liability is limited and where small units are available for moderate investors, and that he can find other investments which are likely to give him a higher return, where shares are available, and where in a free and open market, he can always dispose of his holdings immediately. The general result has been that even the profits of farmers in the United States have been drawn out of agriculture into industry.


BANK FAILURES
BEFORE AND DURING THE AGRICULTURAL DEPRESSION
AREAS OF CIRCLES
NUMERICAL EQUIVALENT
250 FAILURES
150 "
100 "
25 "
0
Total circle represents total failures during the two 4 year periods 1910-1913 and 1921-1924
▷ Total prewar failures, fiscal years 1910-1913
◀ Total postwar " " " 1921-1924

The banks also suffer from farm depression as appears very clearly from this chart. (Courtesy Bureau of Agr. Economics.)

2. *Special Agricultural Credit Institutions*

Neither the old banking system nor the new made any effective provision for the special case of agriculture. But in many ways the farming industry is so different from others that its financial needs have for a long time deserved special attention. It is an industry with slow turnovers, its overhead costs are high, it is mostly noncorporate in form, it is scattered over a wide, thinly-populated area. A banking and credit system intended to meet the needs of city commercial businesses would have many shortcomings as an aid to such an industry. These problems have been more or less recognized for a long time but nothing much has been done about them.

The first of the recent attempts to do something was the establishment, in 1916, of the Federal Farm Loan System which was intended to correspond roughly with the Federal Reserve System for other industry. Twelve districts were set up, each with a Land Bank, and authority in the whole system was centered in a Farm Loan Board. The member banks of the Reserve system have a certain similarity to the farm loan associations which were authorized under the act establishing the system. These the farmers themselves were to establish. The Land Banks were to obtain funds by the issuance and sale of farm loan bonds and loans were to be made to farmers on mortgage security up to fifty per cent of the value of the land and twenty per cent of the value of its improvements.

The machinery shown in this picture was recently purchased by a Michigan farmer for complete equipment of his farm. It includes a tractor, tractor plow, manure spreader, grain drill, hay loader, spring-tooth harrow, riding cultivator, roughage grinder, two-row beet cultivator, corn planter, corn binder, side delivery hayrake, pulverizer, mower, disk harrow, grain binder and wagon. This equipment represents (when new) at present retail prices, an aggregate investment of nearly $4,000—one reason why we say that farmers' overhead costs are relatively high. (Courtesy John Deere Company.)

A series of joint-stock land banks were also authorized. But these were to be private corporations loaning directly to borrowers, at a limited rate of interest, funds obtained by capital stock issues and the selling of bonds. The bonds, however, were to be only a private, not a governmental liability. At the end of October, 1926, mortgage loans of the Federal Land Banks amounted to somewhat over a billion dollars, by a total of 4,942 national farm loan associations. The growth for the first ten years of operation has been slow but steady and a real function has been performed in granting mortgage credits. The joint-stock land banks at the close of 1926 had also granted mortgage credits to a total amount of nearly seven hundred millions.

But obviously mortgage credits are not enough. What farmers need, as well as other business men, are credits suited to the rhythm of their operations—which enable them to borrow funds at the beginning of productive operations at a low interest rate and to repay when the goods have been produced and sold. Ordinary banks perform this function for commercial and manufacturing businesses. But the whole commercial banking system is geared to business other than farming. Farmers need to borrow for longer terms. The customary thirty- to ninety-day periods for loans do not answer their needs. And they need a lower rate of interest than more profitable enterprises can afford. Discussion of these problems finally resulted in the Agricultural Credits Act in 1923. Under this act twelve banks, paralleling in structure the Farm Loan System, were set up and called Federal Intermediate Credit Banks. Their purpose was to loan for periods of from six months to three years, by discounting paper which originated as advances for agricultural operations. Their stock was to be subscribed by the government and they were to issue bonds for the obtaining of loanable funds. At the end of 1926 their outstanding loans amounted to somewhat more than fifty millions.

This, with some minor omissions [1] constitutes the present system for providing farmers with funds. The total of loans outstanding makes it clear that no great service has as yet been rendered by these special agencies. This is perhaps because of overconservative management or of unwillingness to lend to farmers on the same basis that loans are made to other businesses. In this, as in other fields, farmers are under a handicap, largely because theirs is a peculiar business trying to exist within the same system which includes manufacturers and commercial businesses with very different kinds of organization. It is more profitable to do business with these; and the financial system has unconsciously been adapted to their needs and is unsuited to agriculture. This can be remedied in either of two ways. Agriculture may adapt itself more and more to the model furnished by other business. Its credit needs can then be met by the system set up for that purpose. Or new credit devices can be adapted to the peculiarities of agriculture. This was the effort in the legislation of 1916 and of 1923, when a crisis in farming impended, and when national sympathy was aroused. But neither went far enough. Mortgage credit is insufficient in any case. This may assist a farmer in the buying of land but it cannot extend to the financing of his productive operations. The intermediate credits system has failed, at least so many observers feel, because no means for direct contact with farmers was set up. True, they can form

An "intermediate" grain elevator in the wheat belt. Part of the problem of farm credits is that of supplying sufficient funds to finance such products as wheat from planting time until a normal unforced sale can be arranged. Shortage of funds often forces the sale of farm products at the peak of the harvesting season when the year's prices are at their lowest. (Courtesy U. S. Dept. of Agr.)

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[1] For a fuller discussion see Clara Eliot, *The Farmers Campaign for Credit*, 1926. The chief omission is the provision for admitting to Federal Reserve discount of some types of longer-term paper arising from agricultural transactions.

their own credit associations; but business men are not required to do that. A nation-wide system of government banking offices in rural districts loaning funds at low rates, obtained by the sale of government bonds, would be a possible way of admitting farmers to the modern credit system on a parity with other businesses; but so far no such proposal has been contemplated; and none seems likely.

3. *The Agricultural Marketing Act*

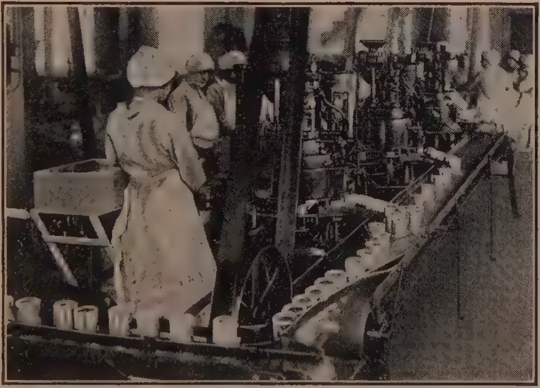
The system of agricultural financing has recently been supplemented by a $500,000,000 loan fund which, by the Agricultural Marketing Act of 1929, was set up by Congress. It is provided that interest shall be at the rate of four per cent or less. Discretionary power is vested in a Farm Board appointed by the President and, since definitions are very general, it appears that nearly anything in the way of financial support, which the Board feels desirable, can be furnished. Loans to be made are, it is true, divided into two general classes: those to be made to separate associations, and those to so-called "stabilization corporations," which we shall presently describe; but these definitions are very broad and inclusive.

This act of 1929 is the result of a decade of political furor over "farm relief." We have already noticed that farmers suffer from certain disadvantages and that they have shown themselves restive a number of times in our economic history. But the depression beginning in 1920 has been especially severe and prolonged. We shall later refer to the alternate proposals made for relief; just here we must notice that the legislative result, so far, of all this agitation, is most importantly represented in this "marketing" act. The idea behind the legislation is that farmers suffer a needless disadvantage in marketing because they operate on too small a scale and too inefficiently in contrast with those who purchase their products. Government help is needed only to assist them in becoming stronger through the forced development of coöperative associations. It is true that, as we shall note later, coöperatives have never thrived in the American economy, and that farmers suffer many disadvantages not touched by any assistance which can be offered through cheap credit. But the present governmental authorities are committed to extreme privacy in business and to a system which calls, on the one side, for competitive arrangements and, on the other, for keeping the government's hands off the planning and directing of affairs. The most that can be done under these circumstances is to assist, by cheap credits, the strengthening of farmers so that they may eventually become sufficiently strong as competitors to join in the universal business conflict without disgracing themselves and the nation by their weakness and their continued complaints. Discussion of the new farm relief program therefore falls mostly under the head of agricultural finance, though obviously the general theory it embodies has consequences to which we shall want to return later when we discuss the problem of the apportionment of income.

The policy clause of the act may be quoted first to show intention:

> To promote the effective merchandising of agricultural commodities in interstate and foreign commerce, so that the industry of agriculture will be placed on a basis of economic equality with other industries . . . by minimizing speculation, . . . preventing inefficient and wasteful methods of distribution, . . . encouraging the organization of producers into effective associations or corporations under their own control for greater unity of effort in marketing, and by promoting the establishment and financing of a farm marketing system of producer-owned and producer-controlled coöperative associations and other agencies . . . and by aiding in preventing and controlling surpluses in any agricultural commodity, through orderly production and distribution.

It will be noticed that nothing is said here about productive efficiency or, in fact, about operations on the farm at all. This is an attempt to better the situation of farmers in the market. It is to do this that the fund is to be used. If, in other words, the Farm Board determines that suitable marketing facilities are now lacking, and if a representative coöperative association can be formed, the Board will loan funds to this association at a low rate to be repaid by amortization over a period of twenty years. The association, in turn, may distribute its funds to members as advances at the time of the delivery of produce.[2] The farmer thus may secure funds to pay whatever debts he may have contracted in growing his crop, and can hold it for a favorable price or he can join with his associates in doing something to it which will bring it nearer to the point of consumption and so eliminate middlemen and their profits. Vegetables may be canned, wheat may be stored or made into flour, fruits may be processed, tobacco may be dried, or cotton ginned, at the discretion or initiative of the group in question.



An activity which is necessary to agricultural stability —as well as an important source of modern food supplies —vegetable canning. It is almost wholly "serialized" and "automatic." (Courtesy American Canners Association.)

The stabilization corporations, for which, according to the act, funds are also to be made available, is an extension of coöperatives into another merchandising field. The coöperatives are to be the stockholders, and therefore owners. These corporations are expected to become, for each commodity, the general organizations which control the trade being built up from associations of coöperatives and representing them in the wholesale field. With perfect organization and country-wide functioning of this contemplated marketing system, these stabilization corporations would become almost the sole agents through whom the commodity could be acquired and would therefore have immense power in the markets. But lacking any such complete development, the corporation could still have an immense influence through its power of "surplus-control." Theoretically at least, it could prevent a disastrous fall in the price of a commodity by buying up part of it. Funds for this could be secured in part from the Intermediate Credit Banks—up to 75 per cent of the current price—and the rest, necessary to the purchase, from the revolving fund of the Farm Board.

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[2] Up to 85 per cent of the current market price.

This, neglecting some interesting subsidiary features, is the financing scheme of the act. As we shall see in a later section, it failed to provide numerous kinds of service which the proponents of the successive McNary-Haugen bills believed it to be the duty of the government to provide. But, in itself, it is an interesting illustration of an attempt of the competitive system to save itself by sacrificing something of its ideal form. Years and vast efforts have been spent by the government to prevent exactly the sort of combination and private control of prices in other industries which here are encouraged in agriculture by access to government funds at lower rates of interest than could otherwise possibly be secured. It is at once an admission that the competitive system has failed in an immense area of economic activity and an attempt to avoid scrapping it altogether in favor of national control. It is interesting, from the special point of view of this chapter, that it should have been done largely through the use of credits and by the setting up of a new supplemental financial organization with loanable funds at its disposal. The financial mechanism does indeed lie close to the controlling centers of economic life.

PART II

RAISING THE LEVELS OF LIVING THROUGH THE REMAKING OF URBAN AND RURAL LIFE

SECTION A

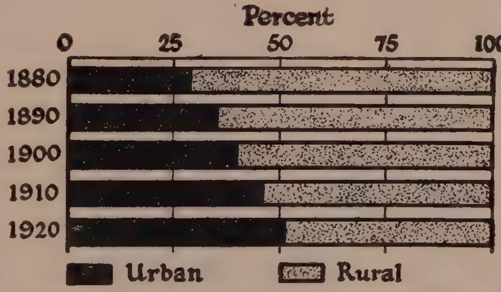
THE REMAKING OF RURAL LIFE

CHAPTER 23

MAKING RURAL LIFE MORE SATISFYING AND BENEFICIAL

1. *Improvement in the Kinds and Hours of Work*

Another side of the effort which goes on constantly to raise the levels of living is that of making rural life not only more efficient but more satisfying and beneficial in other ways. The immediate past has seen very great advances in some aspects of rural life, such as (1) the improvement in the kinds and hours of work both for men and women, (2) the reduction of the isolation and solitude of the farm, (3) the improvement in living standards, (4) the revision of æsthetic standards, and (5) opportunities for the intellectual life. Each of these will probably be somewhat clearer for a little further discussion; also some discussion ought to help us to see more clearly the road we must follow in improving rural life.



Urban and rural population in the United States, showing a definite trend cityward but nearly half the population still rural. (U. S. Census Bureau statistics. The Census Bureau classifies as urban those residing in cities and other incorporated places having 2500 inhabitants or more.)

Improvements in the way in which work is carried on are very nearly equally conspicuous for both men and women. For men, for instance, there is far less of the heavy, mucking work of the primitive farm and much more of the sort which requires a certain mechanical cleverness and a calling out of other than merely physical abilities; and for women there is less need for the heavier duties of farm life than in the past, and more need for forethought and planning. Much of the work of carrying wood and water and of soapmaking, baking, and washing has been eliminated.

Along with the advent of various kinds of cultivating and harvesting machinery which took place in the period immediately following the Civil War, which made life so much easier for men on the farm, there came also a flood of new devices which revolutionized kitchen and household management for the woman. It is no longer necessary to swing the scythe throughout the long back-breaking days of the harvest and haying seasons; and it is

HOUSEHOLD CONVENIENCES IN MOUNTAIN AND OTHER RURAL SECTIONS

Area	Per Cent of Rural Homes Having						
	Telephone	Sewing Machine	Washing Machine	Screened Windows and Doors	Water in Kitchen or on Porch	Bathtub	Sink
The mountain county	3	68	2	6	5	*	1
Rural areas in other sections †	72	95	57	96	65‡	20	60

This table shows two things conspicuously. (1) How in fairly prosperous rural areas, the use of modern conveniences has spread, and (2) the contrast between poor and prosperous areas in this respect. In some places, such as the mountain county cited here, country dwellers live almost as their ancestors lived for many generations.

* Less than 1 per cent.
† From *The Farm Woman's Problems*, States Relation Service, U. S. Department of Agriculture.
‡ In kitchen only.

possible now to delegate to the horse or even to the tractor the burden of much of the preparation of the soil and the cultivation of the crop. Wood is sawed now with the aid of power machinery. And there are many other appliances about the barns and stables that save effort and relieve the strains upon the human mechanism which were borne by the old-fashioned farmer.

Taking some of the drudgery out of farm life. (Courtesy Internatl. Harvester Co.)

But there are an equal number of devices within the household which make work there easier than it used to be. Many of the responsibilities for clothes-making, for the provision of food for the future, and for the carrying out of such recurring tasks as cleaning and washing have been lightened by the coming into use of such generally used household devices as the vacuum cleaner, the washing machine, the electric iron, running water, and electricity and gas for cooking, lighting, and heating. Then too there has been the almost complete taking over by the factories of the provision of such things as bread, soap, canned foods, and clothing, all of which once had to be provided in the kitchens of the farm.

It must not be imagined, of course, that in either of these departments of farm life so much has been done that there is not great need still for improvement. There is still this need. In the first place there are many tasks still performed by the hard labor of women which machines will perform in a not very distant future; and in the second place it is also true that there are a very great many farms where machines have not been introduced to do the tasks that they do so well on many other farms. We fail rather conspicuously in applying the knowledge we have. This is, of course, only to say that machines have not been given the opportunity to do all the work they are able to do, and that eventually we shall require them to do. This is perhaps more true of household devices than it is of machines which assist in the work of producing crops, but it is sufficiently true of either one. We need to make all farms like the best ones, even more than we need to push forward the improvement of the best. An interesting comment on this is furnished by the figures of the National Bureau of Economic Research, which show the hours that are worked by hired women and men on the farm. Of course these do not give us the picture of work by those who do the hiring, which is probably as long or longer, but they are indicative.

HOURS OF WORK ON FARMS

Females employed by the day	40 hours per wk.
Females employed by the week	50 hours per wk.
Males employed by the day	50 hours per wk.
Males employed by the week	63 hours per wk.

Something further is shown by a recent study of the hours worked by farm women.[1] The study was confined to no particular region, but represents a rather superior group so far as intelligence is concerned, who might be expected to save as much time at their tasks as was possible. On the other hand they were of the sort who would do them well.

The bureau found that sixty-three hours and a half a week was the average "working time" for 700 farm women who kept records and reported. The weekly average for strictly "home-making" activities was fifty-two hours, seventeen minutes. The other eleven hours, thirteen minutes was devoted to dairying, care of poultry, gardening, and other similar tasks. The opinion was ventured that for the country as a whole the average would be higher. It is interesting that the typical division (represented in this case by a New York group) of time was as follows: feeding the family, twenty-five hours, fifty-one minutes; cleaning and straightening the house, eight hours, fifteen minutes; other housework, two hours, seventeen minutes; laundering, sewing, mending, and care of the children, together with outside activities, made up the total.

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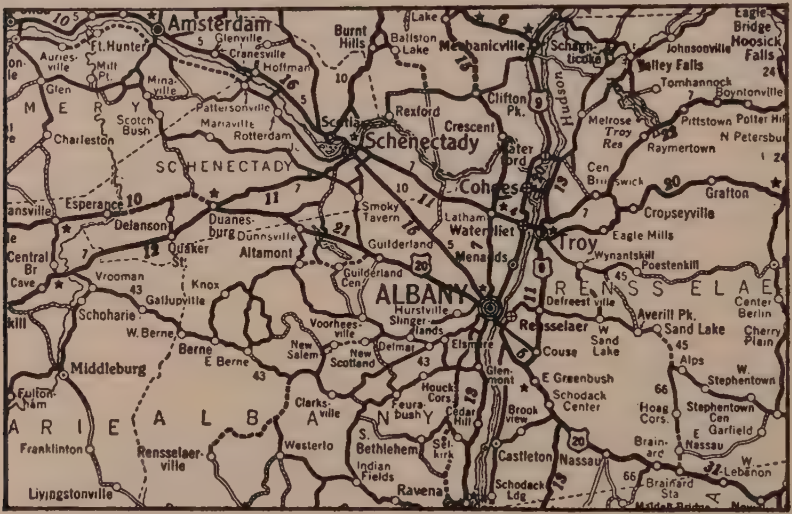
[1] Bulletin of the Bureau of Home Economics of the United States Department of Agriculture.

2. *The Reduction of Isolation*

The elimination of the isolation and solitude of the farm is a problem of considerable importance too. It is one, curiously enough, that would not be raised in a European community, for there farmers live together in villages and go out to their farms to work. It is peculiarly an American problem because in the United States farm families live rather upon the acres they cultivate and so each farmstead is separated from every other, sometimes by a considerable distance. A community is therefore a different kind of social group from any familiar to urban people. It is a group which has little physical contact, whose individuals actually meet only at infrequent intervals. Farmsteads remain separated, for the most part, as they always were, by considerable actual distances; but there have been mitigating circumstances recently which have tended to lessen the effects of separation. Most conspicuous among these have been the telephone, the motor car, and good roads. In this connection it may be interesting to know how much quicker such instruments as the automotive vehicle are adapted to consumption purposes than to those of production. On the 6,500,000 farms of the United States, there were, on Jan. 1, 1928, 4,408,470 motor cars; but only 598,644 tractors and trucks. These motor cars have tended to make possible



A typical road development centering about an Eastern city. Most dwellers in such a region can reach an urban center by motor over concrete highways. (© Standard Drafting Company, Inc., Courtesy Standard Oil Company of New York.)

a participation in community life that was unthinkable on the American farm of thirty-five years ago. It ought also to be remembered that at that time there were no radios and, even, no rural delivery of mails.[2] Then each farm family had very nearly to be its own community and this isolation from the influence of outside cultures tended to the development of provincialism and to the retardation of the spread of new ideas and of the knowledge of new inventions and processes. Also it had its individual effects upon each of the members of such a community. When the family was small or after the children had grown up and left the family homestead, there was a solitude about the work of both men and women which was most depressing and the relief from this solitude which came with the new inventions was a most welcome and necessary change.

A rural mail carrier, a connecting link between the farm and the outside world. Most carriers now are equipped with Fords. This one still prefers Dobbin. (Photo Hine.)

3. *Improved Diet, Sanitation, etc.*

There have been improvements also in living standards. Health has been distinctly improved. Partly this is attributable to the considerable dietary advice now available from various government bureaus. One important aspect of the work of the county farm bureaus has been in connection with the improvement of household budgeting, and the attaining of more balanced use of goods. We know now that in spite of the continuous physical activity of both men and women on the farm, there was a quite common tendency toward malnutrition and dyspeptic indigestion which followed from the improper methods of cooking and eating which were a tradition of primitive pioneer life in America. As physical labor lightens, diet has to lighten also.

New ideas are also making their way into general knowledge concerning sanitation and housing. The farm home of the present in many cases contains such relatively new devices for improved health and comfort as bathrooms, furnaces, sewers, hardwood or linoleum floors, and better provision for light and for ventilation. The contrast between the homes of any past time and those of modern farms is most striking. We now have learned to value the better homes of an earlier time for their architecturally lovely exteriors; but this does not blind us to the fact that they offered very few of the requirements we expect from a home in the way of comforts and amenities. That there is a very real improvement may be inferred from certain facts revealed in some recent investigations of rural life. The first of these studies, for example, was made in Livingston County, New York, chosen because it was typical of a moderately successful general farming region.[3]

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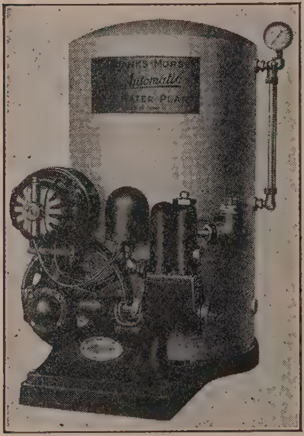
[2] Rural free delivery was begun on a small scale in 1897 and for a number of years expanded very gradually.

There it was discovered that water was piped into about twenty per cent of the houses, gas or electric light was found in twenty-five per cent, and automobiles were owned by more than seventy-five per cent of the farmers. These figures are unquestionably high for the whole country because Livingston County is a relatively prosperous agricultural district; but they show the extent to which rural life is being improved in those localities where prosperity is sufficient to permit the expenditures. It must be remembered in all this that the possibility of these improvements is relatively recent. Bathrooms and furnaces were not used even in the ordinary city home of twenty-five years ago, and their adoption, therefore, into nearly one-quarter of the farm homes of a typical rural county is a phenomenon of some significance.



An automatic water system for the farm home. Running water in the house has now become almost a necessity in this country, though a tragically large number of farm homes still lack it. (Courtesy Fairbanks, Morse & Co.)

Another aspect of improvement in health which may very well be mentioned is the fact that better roads and automobiles make possible quicker access to hospitals and civic health centers as well as local physicians; and these are important in view of the emergencies which often arise in isolated communities. Formerly the city hospital was an impossible distance away and if there were an operation to be performed, for instance, it usually had to be performed by the general physician in some part of a farm home which was, to say the least, extremely ill adapted to asepsis and the general treatment of critical illness. The confidence that farm families feel in the quality of the life they lead is immeasurably raised by such improvements as these, and the prospect of a new attitude toward permanent farming life is made considerably brighter by just such advances.[4]

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[3] *The Standard of Life in a Typical Section of Diversified Farming*, by E. L. Kirkpatrick in coöperation with the United States Department of Agriculture. Published by the Cornell University Agricultural Experiment Station, 1923.

[4] For the background of rural culture in America and especially for an illuminating treatment of early social conditions and their reactions on health, education, recreation, etc., James Mickel Williams' *Our Social Heritage* (Knopf, 1925) is an unfailing source. The best pictorial history is to be found in *The Pageant of America*, especially Volume iii,

4. *Better Education*

Education ought also to be mentioned among the improvements very rapidly taking place in rural life. America is not yet very far removed in time from the little red schoolhouse we read of in the literature of nineteenth-century America; but the little red schoolhouse as an educational institution has been fearfully overpraised. It was sufficient perhaps for pioneer needs. It accomplished a great purpose in our history, but it was without the most elementary provision for the educational devices we think necessary now for the training of children, and no other comment need be made upon its limitations than that one teacher was provided for all children between the ages of six and twenty.

Interior of a country school of the old type. The new union schools make other communities ashamed of such educational backwardness as this. (Photo Hine.)

Such a situation could not possibly result in the efficient schooling of more than a very small percentage of the very brightest of the pupils; so that with the coming of the automobile and the development of good roads, one of the earliest changes in education was the provision of free transportation for rural children from their homes to central schools located where they could be reached with the least effort by the greatest part of the community. These central schools can be far better than the old schools were because they can provide specialized education in a number of ways. They can have teachers for all the different ages and even for different capabilities. They can offer in the older years a greater variety of possible occupational specialization and training and they can assist very greatly in the movement going

which contains a wealth of allusions to social institutions which seem as permanently dead to the present generation of students as those of feudalism, and which can yet be remembered by people of something less than middle age.

on in the whole United States for adult education and particularly, of course, in the technique of agriculture and of home management.

One result of this, as would be expected, has been to increase the number of students trained to take up the work offered in agricultural colleges; and from this perhaps we shall gradually come to have a farm population with the same access to and the same proportion of people who have had university training as is found in comparable urban classes.

A factor of somewhat less importance than rural education but still worth mentioning has been the growth of the rural press in the United States, especially the development of agricultural weeklies[5] devoted to the technique of farm operations and to the betterment of rural life generally. The most casual study of these journals must make it clear to the student of contemporary civilization, if it does nothing else, not only that agriculture is an industry with a technique and a literature of its own but that it is a way of life which somehow has the possibilities of advancement; and that its people intend to create out of a not too favorable present a future which shall be better for all who are affected by it. The rural press is expressly devoted to this uplifting of rural life and meets the various problems of farmers honestly and with the intent to help in permanent betterment. Unfortunately the local rural press, however, has distinctly degenerated. The little newspapers which once had so much of the color of community life have become now little more than advertising media for merchants. Editors are no longer of the old strain, vigorous in the advocacy of community betterment and loyal to the peculiar culture of the locality, but are mere rubber stamps for majority opinion, economically terrorized and colorless. Reading matter in local papers is mostly the "boiler plate" furnished by big agencies deeply tinged with one or another sort of propaganda. One must look to the farm weeklies rather than to the small-town newspapers for a genuine representation of rural opinion.

A demonstration and exhibit train. A form of adult education which is growing in favor in the rural sections. (Courtesy the *Business Week* and the Northern Pacific R. R.)

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[5] *Wallace's Farmer*, *The Rural New Yorker*, *Hoard's Dairyman*, and many other weeklies are representative of this vigorous rural press.

5. *Recreation and Its Improvement*

Recreation, as may be imagined, has changed very greatly in rural life. Whereas once it was very difficult for people to come together in social gatherings on account of the difficulties of transportation with only horses and wagons for conveyance and perhaps muddy or dusty roads by which to travel, now the motor car and good roads have made it very much easier. Social gatherings are therefore very much more frequent and farm life takes on something of the highly socialized character of urban life. There are few farms, at least in the eastern part of the United States and the Middle West, which are so far from community centers as to make it impossible to travel to them for an evening meeting, lecture, or moving picture; but the radio also has been of special use to the farmer for recreational purposes. No very lengthy description is needed to understand the difference it makes to a farm family to be able to listen to distant orchestras and to overhear the proceedings of distant meetings of various kinds. It has had the effect of making the farm family feel itself more a part of the great world and less isolated and self-dependent. It may also be said that the cheapening of popular literature has had somewhat the same effect, for there are few families now who are not kept in touch with the doings of the world through the newspapers and the weekly magazines.

The community center at Waverly, Pennsylvania. Many such institutions are springing up in rural sections everywhere in the country. Not all of them are so handsome as this one, but many are larger and quite as well suited to the purpose. (Courtesy Playground and Recreation Association of America.)

6. *A Changing Rural Culture*

These new contacts with contrasting cultures through the press, the radio, and the moving pictures have inevitably made for a revision of local standards, so that the culture of rural communities tends all the time to become less differentiated and more alike. This is partly a favorable circumstance and partly an unfavorable one, for it has caused the good as well as the bad elements of local culture to be given up almost entirely and has informed the rural community with the cultural characteristics of that part of the world upon which it depends for its amusement and its ideas—that is to say, the city. That this can go very far anyone who is familiar with modern rural life can testify. Fashions, recipes for cooking, and perhaps even the development of slang, have come to be, to a very great extent, not elements of a localized culture, but phenomena common to the whole country. The difficulty with this is, of course, that the fashions originating in cities are intended to be urban fashions, that the recipes also are intended for city tastes, and that the slang is likewise efficient for the expression of city ideas rather than country ones, and that none of these is entirely at home in rural America. So that although there is perhaps a gain in the fact that the whole country comes to feel more nearly the same emotions, and tends, therefore, to become more unified, it loses at the same time some of that precious quality of uniqueness which has always been the mitigating circumstance of provincialism everywhere.

However, whether on the whole this development is good or not, we know that it exists and will continue to exist, that local differences will become less and less important, and that wider and wider areas will continue to have more and more in common. If we happen not to approve, we can at least take some satisfaction in knowing that the opportunity for the development of the intellectual life grows greater along with the loss in local mannerisms, for not only do newspapers and the radio bring amusement to the rural home; they also bring contacts with all the fields of scientific endeavor and the fresh impulses which must radiate from the centers of culture, however hidden the kernel of goodness may be in outer layers of worthless vulgarisms.

Village and country dwellers frequently met, a few decades ago, around the pot-bellied stove of the general merchandise store. The cracker barrel philosopher contributed something to the American tradition—a kind of homely common sense—which we are by way of losing now. David Harum and Emerson, alike, would have appreciated the social significance of the groups Mr. Frost loved to record. Another Mr. Frost—the poet—is perhaps the most vivid remaining artist whose values are still those we can impute to isolated country life. The Country Store as a Social Center—A picture by A. B. Frost. (© C. P. Co. Courtesy of the *Ladies' Home Journal.*)

There has been, it is worth noting, a considerable beginning in the United

States of a school of modern literature devoted to the social problems that are peculiar to rural life. The main characteristic, perhaps, of this literature has been a critical self-examination of rural communities and a weighing of the worth of the life that is lived there, and if there has been more acrimonious satire than helpful suggestion in it, this is perhaps because we are becoming self-conscious and are thinking of self-improvement; it may be also partly because satire usually paves the way for helpfulness. And so, although *Main Street* and *West of the Water Tower* seem to condemn American rural life as a whole, there are also numerous books concerned with the study of rural life[6] which more or less successfully make the attempt to select from the features of rural life those which are most helpful for the future and most calculated to develop into the kind of culture that we should wish for rural America.

It is in this searching self-examination that the greatest hope for the future lies, and it is through the reconstructive activities which begin with self-study that rural life will ultimately be remade. It must never be forgotten that agriculture is not only an industry but also a way of life, just as manufacturing is not only an industry but a way of life; and that the two have had developments so distinct and so different that they can, after all, have little in common. It is by the recognition of these differences in development and needs for the future that we can perhaps best provide for a rounded national life which includes both in proper proportions and is developed to the fullest extent of which each is capable.[7]

Having now given some attention to the possible results to be sought in the activities of rural life (1) increasing production and (2) making rural conditions more satisfactory, and having discussed urban productive activities, we may now go on to examine the means of obtaining a better situation for living under urban conditions. As in so many places, no distinct line of separation can be drawn. If the radio and the talkies mean something to rural dwellers they mean something also to city people. As we have already said, there is a tendency, now that we have more rapid communications and a wide spread—with mass production and consumption—of the ordinary things we eat and wear, for city and country to display more likenesses and fewer regional peculiarities. If it would be difficult to say, set down on Main Street anywhere in America, what city one happened to be in, it would likewise be difficult to judge from the dress of people, the way they work, or the things which interest them, the rural region into which one had been dropped. Some few peculiarities remain; but they are few and passing, most of them—the ones, at least, that have not to do with differences of geography. The ways of improving life in one place are frequently the ways of improving it elsewhere. We are going on to speak of urban improvement; but it will be realized that what we need to do there is often of the same sort which is demanded in rural life. We have not wanted to be more repetitive than necessary; and for that reason we have sometimes not mentioned matters which would have been in place if they had not been referred to elsewhere.

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[6] See, for instance, C. J. Galpin, *Rural Social Problems* (1924), and other books of the Century Rural Life Series. Professor L. H. Bailey of Cornell and Professor Eugene Davenport of Wisconsin have done notable pioneering work in this field. The student will feel well repaid for investigating their writings. And see also in this connection various volumes of the papers and proceedings of the American Country Life Association, published by the University of Chicago Press.

[7] In *Recent Economic Changes in the United States*, a section on Agriculture by E. G. Nourse refers to some problems which are germane—the advance of power farming and its consequences, together with the technical changes occurring throughout agriculture. We have been concerned with these before in this book; but the interested student will always want to pursue his reading in as many places as possible. The second chapter, also, of John D. Black's *Agricultural Reform in the United States*, to which we shall refer again, is an appraisement of the place of agriculture in the national economy.

SECTION B

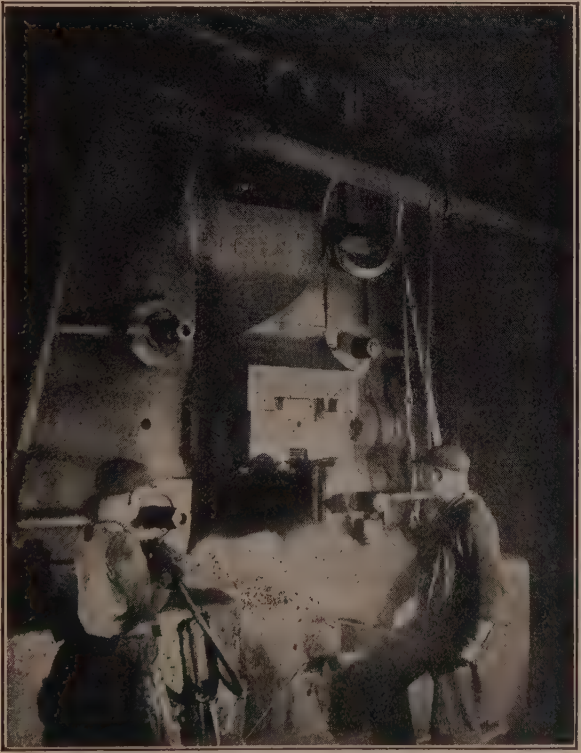
THE REMAKING OF URBAN LIFE

CHAPTER 24

REORGANIZING THE KINDS AND HOURS OF WORK

1. *Improvement in the Kinds of Work for Men*

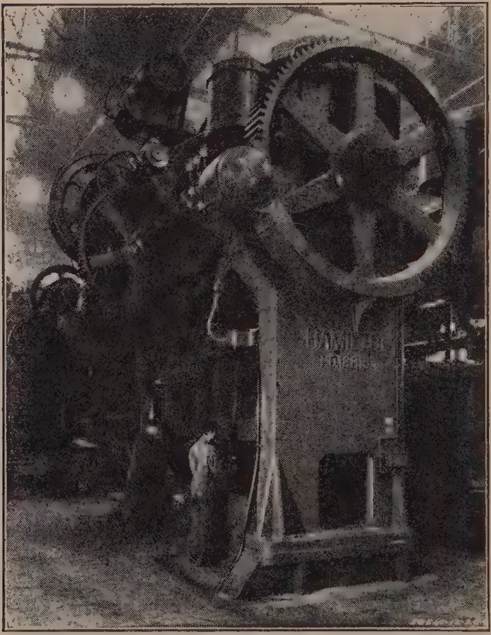
In general what is needed to better men's work in our present situation is to reduce both the amount of heavy, mucking work and of repetitive, monotonous work. These two kinds of labor are the bane of the modern working life. The kind of heavy work still done by men may be seen in such places as steel mills, cement factories, and even more typically in all the extractive industries. The repetitive type of work may be seen in machine shops and factories wherever these exist.



(Courtesy of Olds Motor Company.)

The typical heavy work is lifting, pushing, hauling, and striking things. The first helps to the man who had to do this kind of work were the simple hand tools devised very early, such as the hammer, the ax, and the lever. There is still much work to be done by hand with shovels, sledges, wheelbarrows, in loading and unloading trucks and wagons, in moving materials and machines about and in breaking up and remaking raw materials into the forms of commerce, but the tendency is unquestionably toward elimination. The typical machines which take the place of man's effort are of such a sort as steam shovels, mechanical hammers, run by steam or compressed air, trucks handling loads from a few pounds to many tons, and conveyors carrying things from one machine to another—all are familiar to the observer of industrial processes.

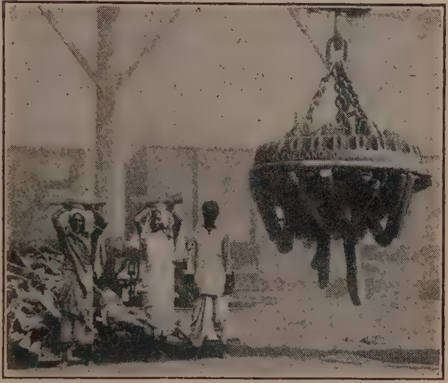
It was in the process of the elimination of this heavy hand labor, however, that the other bad feature of industrial work crept in. As air hammers, mechanical shovels, molds, lathes, presses, polishers, saws, and planes came in there developed a new type of industrial work—machine tending. This work involves very little actual expenditure of effort but much of what has often been very much worse—the terrible monotony of standing above or alongside a machine which repeats one operation again and again all day long, feeding it or removing materials from it. The worker at such a task must accommodate himself to the machine, becoming almost a part of it. Physical motion for this machine tender has been reduced to a minimum. Mental effort has been practically eliminated. So that such a job calls for the use of only a very limited part of the highly developed faculties of the human mechanism. A single motion involving a few of the muscles of the arm may have to be repeated all day long. This leaves a residue of potential abilities which may cause the individual the utmost distress, for if muscles and nerves are not used they either atrophy or form a fruitful cause of psychoses which are disastrous in subtle and diverse ways to the individual involved.



The heavy job of work has been turned over to these machines; men only tend them. The advantages and disadvantages of the change can be imagined by studying such typical situations as this. (Courtesy Ford Motor Company.)

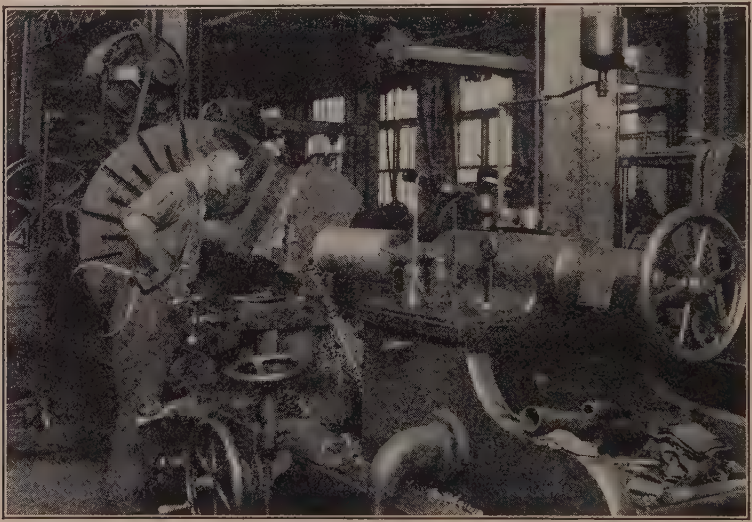
Relief from the heavy, mucking work which is too great a strain upon the human mechanism is to be expected, then, from the development of machines such as the steam shovel and the mechanical hammer. Relief from the too repetitive jobs which have replaced heavy ones, also may be expected, perhaps, from carrying the machine to its logical development. Monotonous work is an anomaly and must in time be eliminated. A job which asks very few motions or very simple effort from the human mechanism is of the very sort which can be turned over in time to a machine. Machine tending is, much of it, unnecessary, and what may be expected to happen is the linking of machines in such efficient series that they automatically feed each other, so carrying out the coördinations of the total job without the intervention of man. Industrial engineers have a way of saying that "a repetitive job eliminates itself," and what they mean is, simply, that repetition is the essence of the working of machines and will sooner or later be taken over by them.

It is difficult to see anything but improvement in the situation from this expected change. In the first place, the machine does the job more efficiently and feels no hurt from unused capabilities, since it was designed for the purpose of carrying out a particular operation. Man, being trained for far different activities, finds his whole mental and physical mechanism outraged by the necessity of performing tasks which are unsuitable to him. In the second place, the individual involved will be greatly benefited by his having been removed from the responsibility of carrying on a task against which he is always in more or less conscious revolt, and which is far below his abilities. The man power of industry may be expected to be freed by this process for the higher work of industrial life, for the planning and adjusting operations of industry. Machine work ought to be turned over to machines. Man ought to be reserved for man's work.



We seldom see the elision of so many years of development in one picture; yet in numerous instances the old methods survive in direct competition with the new—apparently from sheer inertia. These coolie women are carrying one iron pig on their heads; the magnet lifts as many as seventy of them. (Courtesy The Electric Controller & Mfg. Company.)

Special mention should be made in any discussion of the improvement of modern work, of the development of the routine and monotony of clerical tasks. There are, in the United States, millions of persons involved in the paper work of industry, some of whom are attached to industrial plants, some of whom have to do with the various occupations of marketing, and some of whom have to do with the recording and checking up of the general efforts of industry. It is unpleasant to be forced to bend for eight hours a day above a turning lathe, a polishing machine, or an air hammer; but it is scarcely less unpleasant to bend for an equal length of time above a ledger or a typewriter. The same kind of relief may be expected for this type of effort, however, as for others. There has been, in the last few decades, a considerable development of writing, recording, and calculating machines. No one can say how far this will go; but it seems safe to assume that in so far as these tasks are repetitive and monotonous, they will in time be performed by machines. There are already in existence many bookkeeping and calculating devices which would have been inconceivable not many years ago, and it seems but a short probable development to the elimination of purely stenographic, calculating, and recording tasks.



The modern lathe has made possible the speedy completion of operations which were formerly accomplished only by tedious hand processes. (Photo Hine.)

So far as the immediate present is concerned there is a considerable need for relief from repetitive and monotonous tasks in factory and office which is being met by the modern development of various forms of recreation and amusement. Not all of these are taking the best possible direction, perhaps, but all of them represent attempts to escape from the pressures of industrial tasks which require at once too much and too little of men.

There is a surplus of energy. It must find an outlet in some form. And this accounts for the vast modern development of amusements and sports. The criticism to be made of the direction this movement has taken is that there is perhaps too little *actual* participation in modern forms of sport and amusement and too much stress upon *vicarious* participation. Perhaps the mental faculties of the individual who watches the sports spectacle in one of our modern stadiums, are exercised, but the physical effects cannot be said to be very salutary. What is needed, above all, for factory and office workers is to get out of doors and to exercise not only the mental machinery but the physical equipment as well. Modern sport offers all too little possibility of this for the ordinary individual.

For the business man there is the country club to which he habitually resorts and where he finds the healthful relief from office strain which ought to be available too for the persons in his organization who are perhaps less financially prosperous than himself. The development of city parks and adults' as well as children's playgrounds, the cheapening of motor cars, the development of recreational parks at mountain and seashore—all are movements in this direction and deserve the utmost encouragement.

Public tennis courts in Prospect Park, Brooklyn. Provision for outdoor sports is assuming really large proportions in America. (Courtesy of Park Commissioner, Brooklyn, N. Y.)

A great deal, however, can be done and, indeed, is being done, in the reorganization of the industrial plant itself. The really modern factory stands in vivid contrast to the factory of a generation ago in all the requirements of the human beings who make it their principal place of activity. In a well planned factory, thought has been given, not only to the efficiency with which materials flow from beginning to end of the factory processes and the coördination with which the assembly of the various elements of production is carried out, but also to the human needs for light, for air, for cleanliness and general comfort, and indeed, for the very human need for pride in the place of work. This whole tendency toward the betterment of the conditions surrounding modern work tends inevitably toward a closer approximation of liking for the job. This in itself helps to make work not only a means but an end, which is, of course, what it ought to be. We shall have reiterated many times before the end of this book that there is a need not only for efficiency in production but also a conception of work as a part of life and a need for making it more satisfying and beneficial.[1] It is not too much to say, possibly, that there is a likelihood of such a development within the next few decades. When work has been made as pleasant for all as it is now for some, and when the place where work must be done has been reorganized in all cases upon the plan of the better examples that are to be found at the present time, we shall have accomplished a regenerative task.

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[1] Cf. T. V. Smith, "Work as an Ethical Concept," *Journal of Philosophy*, xxi, 543–54 (Sept. 25, 1924).

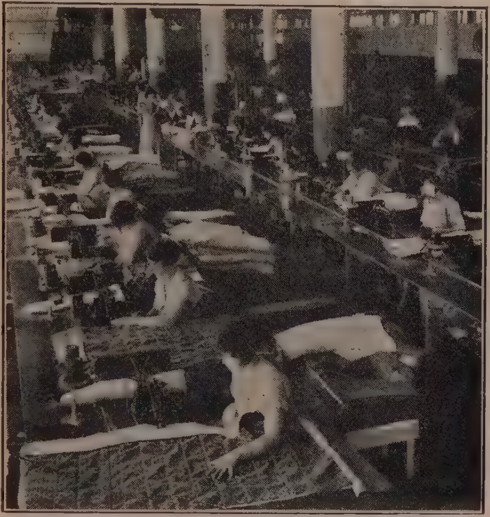
Types of women's work—ranging from the most unskilled to that requiring special preparation. (Photo Hine.)

2. *Improvements in the Kinds of Work for Women*

The three chief kinds of work for women may be enumerated as, (1) housework, (2) factory work, (3) office work.

There are altogether in the United States some 8,500,000 or more women who are to be listed as gainfully employed. It is notable that this is nearly half a million more than were gainfully employed a decade ago (at the census of 1910). If, however, the increase of population is taken into consideration, the proportion of women gainfully occupied in the United States dropped from 23.4 per cent in 1910 to 21.1 per cent in 1920. On the face of these figures it would seem possible to say that employment for women is decreasing; but this is more apparent than real, for the number of women listed as working in the manufacturing and mechanical industries actually increased nearly 5 per cent between 1910 and 1920 and the number of women engaged in such clerical occupations as stenography and bookkeeping considerably more than doubled. The decrease in the gross number of women who work is due to the fact that all through this decade many women were dropping out of the employment listed as agricultural and nearly as many out of that listed as domestic service. This was perhaps to have been expected. The change in the home has decreased the amount of domestic service needed. And women have found it profitable to work in factories; and the change in the character of agricultural work has reduced the possibility of participation in it by women.

On the other hand, in eleven manufacturing industries as listed in the United States Census, including clothing, silk, knitting, lace, hand embroidery, candy, paper boxes, and paper bags, women actually predominated over men. The thirty occupational groups each employing 50,000 or more women are listed below.



(Courtesy of Olds Motor Company.)

This perhaps gives us some notion as to the numbers of women engaged in factory work and office work and reveals the fact that these occupations are expanding. It does not, however, show the numbers engaged in housework.

OCCUPATIONS EMPLOYING 50,000 OR MORE WOMEN[2]

	1910	1920
Farmers, general farms	257,703	247,253
Farm laborers, general farms	1,514,107	788,611
Dressmakers and seamstresses (not in factory)	447,760	235,519
Milliners and millinery dealers	122,447	69,598
Semi-skilled operatives:		
Cigar and tobacco factories	71,845	83,960
Clothing industries	237,270	265,643
Food industries	36,600	72,402
Iron and steel industries	23,557	57,819
Shoe factories	59,266	73,412
Cotton mills	140,666	149,185
Knitting mills	65,338	80,682
Silk mills	50,360	72,768
Woolen and worsted mills	52,056	61,715

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[2] *American Labor Year Book*, 1923–24, p. 35, also Women's Bureau, U. S. Department of Labor, 1922.

OCCUPATIONS EMPLOYING 50,000 OR MORE WOMEN—*Continued*

	1910	1920
Telephone operators	88,262	178,379
Clerks in stores	111,594	170,397
Retail dealers	67,103	78,980
Saleswomen (stores)	250,487	356,321
Musicians and teachers of music	84,478	72,678
Teachers (school)	476,864	635,207
Trained nurses	76,508	143,664
Boarding- and lodging-house keepers	142,400	114,740
Housekeepers and stewardesses	173,333	204,350
Laundresses (not in laundry)	520,004	385,874
Laundry operatives	76,355	80,747
Nurses (not trained)	110,912	132,658
Servants	1,309,549	1,012,133
Waitresses	85,798	116,921
Bookkeepers and cashiers	183,569	345,746
Clerks (except clerks in stores)	122,665	472,163
Stenographers and typists	263,315	564,744

So far as women's work in offices and factories is concerned, it is as bad as men's. As a matter of fact, its most depressing qualities are the ones which have made it available to women and children.[3] It was not until machines took over a great part of the heavier muscle-stretching jobs and substituted for them the lighter tasks of machine tending that women and children could find a place in factories. It is tragic that women should have escaped from the old-fashioned home, where their abilities were greatly needed and appreciated, into the kind of factories which were typical of the nineteenth century, and are still all too prevalent.

The factory worker. (Photo Hine.)

Possibilities of relief, however, exist also for women. Women's jobs in industry are of the very types machines can perform with the greatest efficiency and in many cases in industry at the present time, it is only a question with factory managers of the relative cheapness of woman or child labor and the installation and operation of machines. Very often it happens that some process for which a machine has already been invented and is now used in some places, will not be adopted by some other factories because women or children are available for the task at such cheap wages that it would not "pay" to make the expenditure necessary for the installation of machinery. In time, however, as human effort becomes more valuable and as the potentialities of women in industry become more apparent there will take place in all probability the same kind of substitution of machinery for human effort as is taking place in the case of men's work.

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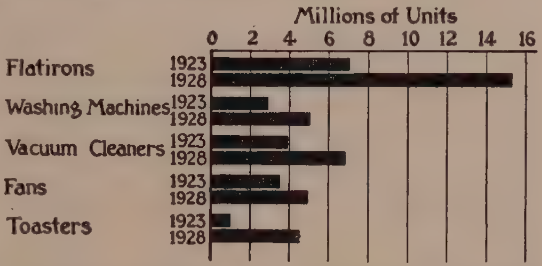
[3] It is significant, in this connection, that more than 2,000,000 *married* women are listed in the 1920 census as gainfully employed.

So far as housework is concerned, it can also be said that there has been generally a vast improvement. This is not to say, however, that there is not room for still more. In the typical kinds of work such as cooking, cleaning, laundering, sewing, preserving, and the care and education of children, much has been done to make the effort of women more efficient, but it is undoubtedly true that more mechanical improvements have been made in the other departments of modern life than in the domestic arrangements of the home. This is apparently because the work of the home is done on a small scale and was at first less adaptable to machinization and because women have never received any training in the mechanical and planning arts which have had so rich a development in industry. It is a curious fact that most of the improvements in household engineering have taken place as a result of man's ingenuity rather than woman's and as a sort of by-product of industries which made and wanted to sell the improvements. It is in this way that improved stoves, cooking utensils, implements for cleaning, laundering, preserving, and other household jobs have come into use.



Electrical devices contribute enormously to lightening housework. The numbers produced in each year, 1923–1928, are shown in the diagram. (Data from *Recent Economic Changes.*)

The kinds of work done in the home, however, are very ancient crafts and develop readily into mechanical arts where the scale is sufficiently large. Cooking, for instance, has long been recognized as essentially artistic in its nature and in a modern well planned kitchen with all of the world's food materials at command, the culinary artist can create as satisfactory a masterpiece as can be created by any other craftsman.

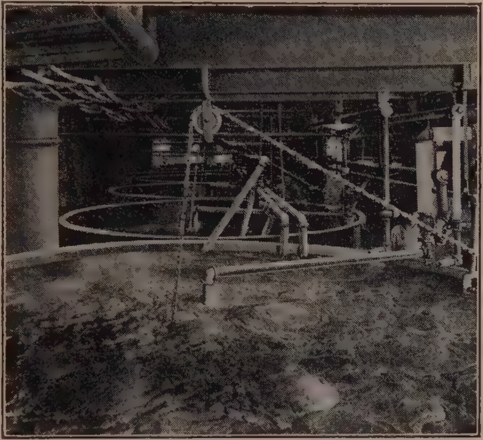
It would be more difficult to make out a similar case for other tasks of the household such as cleaning and laundering, and yet there have been vast improvements in these as well. Soap, for instance, as it is now made is a vast improvement over the soft soap made in the home fifty years ago. And there are a hundred improvements in the utensils used for cleaning and laundering which have tended to reduce the unpleasantness of this sort of work to a minimum. The most conspicuous of these are perhaps the suction cleaners which operate by electric motor, and the electric washers and ironers.

So far as preserving is concerned, there are many superior contrivances for pressure cooking and for the easy sealing of cans, as well as innumerable small but precious contrivances for the preparatory stages. It is, however, true in spite of these facts that very little preserving is now done in the home. Most of it, like, indeed, the other traditional household tasks, has been taken over by the factories. Sewing is another household art which has almost disappeared. Two generations ago practically all the clothing of the family was made in the home, even though at that time the cloth was perhaps not woven nor the wool carded and spun there as it had been a little earlier. Now, not only is the cloth made in factories but the clothing is cut and sewed there too, so that contemporary folk go to the stores to buy clothes

These modernized kitchens not only enhance the æsthetic values of home work; they also save time and energy which can be devoted to other activities. But compare them with the pitifully meager and ugly kitchen equipment of the poor farm home which was pictured in an earlier chapter. (Courtesy Good Housekeeping Institute.)

as well as canned tomatoes or soap. Home sewing nowadays is confined to the more artistic touches and to altering and repairing.

Aside from these duties of the housewife, there is the still more important one of the care and education of the children, which takes up so much of the time and effort of the housewife; but here, too, there has been a great change. In the first place, families have been greatly reduced in size, so that there are fewer children to be raised and educated than in the families of our ancestors. Also, however, there has been a change from education in the home to education in formal places devoted to that purpose which we call schools.

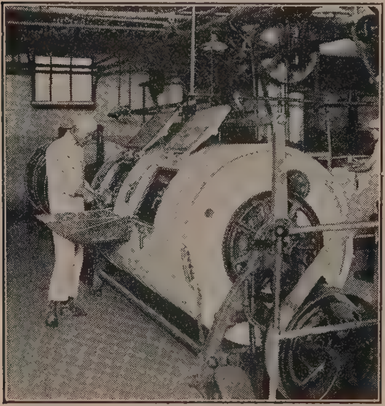


Soap-making on a large scale.
(Courtesy Swift & Co.)

In a rural civilization, such as America formerly was, it was enough if schooling taught boys and girls how to figure and read and trained an occasional boy for the career of a pioneer lawyer, minister, or school-teacher. The rest of the education of a child was got in the home or on the home farm. The girls were apprenticed to their mother. It was there that they learned to cook and sew and do all the various complicated tasks then involved in what was called housekeeping and the boys were likewise apprenticed to their fathers, who taught them the work of field and stable, and the husbandry of grain and cattle, which was in all likelihood to be their future occupation. And this was considered to be an adequate training for that kind of life.

An old-fashioned hand loom and a modern electric loom. (Photo Hine.)

Obviously, however, life has become very different now and such apprenticeship-training is no longer possible. We have in consequence developed a system of schools to take over this task which formerly was a part of the duties of father and mother, and have developed a special profession called school-teaching to perform this function.[4] In spite of this, however, a great deal of the responsibility for raising and educating children must remain upon the mother of the family. Although schooling occupies many hours of the day and devotes itself to the formal education of the child, it has not so far succeeded in taking the place of the intimate understanding which exists between parents and children, and which makes it so much more possible for fathers and mothers to transmit the technique and morality of life to those who are coming after them.


Modern butter-making—a decided contrast to the old-fashioned churn with dasher, known to rural folk of the past. Some of the old-fashioned ones still remain, of course. (Courtesy Swift & Co.)

The sole responsibility, however, is no longer the mother's. In this field, as in the others, the duties and responsibilities of women in the home have been vastly lightened, so much so, indeed, that many commentators are willing to say that the tasks of the modern household are no longer adequate to the equipment and training which women are now prepared to bring to their life's work. And indeed there are two phenomena which seem to point to this as a fact—the modern movement of women into industrial tasks of various kinds, and the restlessness of women everywhere with the duties of housework.[5]

The general line of improvement then, so far as women's work is concerned, may take either one of two directions. (1) It may be that the kitchen will be reconstituted as the center of family life with all its activities made more enjoyable because they are more artistic and more efficient, or (2) home duties may be eliminated steadily in favor of commercial or coöperative schemes and so the home may be very nearly abolished. It must be confessed that the rapid growth of urban life and the influence of that life on the home, seem to make the latter the more probable alternative. The city seems to be making the typical kitchen a kitchenette, when indeed it doesn't move cooking and eating into the restaurants, laundering into the steam laundry, preserving into the cannery, sewing into the factory, and the care of children into the school. For women who exist in this typical

[4] Cf. also the discussion of education in the following chapter.

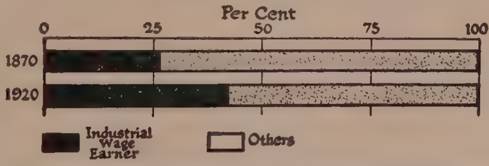
[5] Cf. Lorine Pruette, *Women and Leisure*, 1924.

situation it is increasingly impossible to find a career in home-making, and they are forced to make a choice between a life essentially idle or trivial, and going out into the industrial world and finding whole- or part-time work in office, store, or factory.

The choice of the better women is quite obvious. They choose the occupation which challenges their powers, and this makes a problem which as yet we have hardly begun to analyze and to try to solve, the problem of at once utilizing women's energies in industry and making it possible for them to maintain the necessary relationships with the family which is dependent upon them. This is by no means an impossible task, however; it is simply one which requires more study and attention than hitherto have been given it.

3. *Hours of Work in City Trades*

We have already referred to the fact of the continued existence of such working conditions in city occupations as make necessary, because of the monotony or general unpleasantness of work, some limitation of the hours required. This is especially true in factories where there is noise, motion, and monotonous effort and is, of course, intensified where the occupation must be carried on in poorly lighted and ventilated working rooms. A scientist or professional man whose time is his own, as we say, may, without injury, work for very long hours; but the worker who has to repeat his task every day, has to think in terms not of one stretch of work or of two, but of all the years ahead. His income and that of his family is dependent upon his continuous effort. He cannot take a day or two off to recuperate whenever he feels like it. He is a part of a machine moving relentlessly forward, and when the machine moves he is expected to be there to take his part.



Industry employs an increasing number of the wage workers. (Based on statistics compiled by Alvin H. Hansen.)

It is this situation we must think of when we are considering the problem of the reduction in the number of hours required of the usual worker. It was, of course, not many years ago that the prevailing hours per day in industry were twelve, but there seems to have arrived a time now when there is a general agreement that for the usual type of city-factory work the eight-hour day is about the maximum which can continuously be expected of human beings; and that in many cases the six- or seven-hour day would be far preferable from the point of view of human efficiency. The length of the working week has indeed decreased between eleven and twelve per cent as compared with its average length for the ten years 1890–99.[6] Figures taken from the statistical abstract of the United States show that nearly half of the employees in manufacturing industries in 1923 worked in establishments which had adopted the forty-eight-hour week. The change in this respect can be seen by looking at the accompanying table.

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[6] Douglas, Hitchcock, and Atkins, *The Worker in Modern Economic Society* (University of Chicago Press, 1923), p. 348.

Prevailing Hours of Work per Week	Per Cent Distribution				
	1923	1921	1919	1914	1909
All groups	100.0	100.0	100.0	100.0	100.0
44 and under	9.9	13.7	12.3	11.8	7.9
Between 44 and 48	4.5	4.2	3.8		
48	31.7	33.6	32.6		
Between 48 and 54	21.9	18.2	16.5	13.5	7.3
54	8.8	7.8	9.0	25.8	15.4
Between 54 and 60	14.0	12.6	13.8	22.0	30.2
60	7.3	7.4	9.0	21.1	30.5
Over 60	1.9	2.5	3.0	5.8	8.7

Perhaps even better information on hours of work is to be had from the investigation of the National Bureau of Economic Research.[7] This report makes some interesting observations: "Of all classes of employers reporting, those engaged in rendering domestic and personal service record the longest full-time hours for those working under their direction, the average being slightly more than eight hours daily for a seven-day week. Farmers and retail merchants each require over fifty-three hours of work per week. Employers in a considerable group of industries each call for less than forty-eight hours per week from their workers. This group includes building and construction, finance, public and professional service, paper and printing establishments, and factories making textiles, clothing and leather goods and other goods."

YEAR	LESS THAN 49 HOURS	LESS THAN 54 HOURS	LESS THAN 55 HOURS	LESS THAN 60 HOURS	LESS THAN 61 HOURS
1909	7.9	15.2	30.6	60.8	91.3
1914	11.8	25.2	51.1	73.0	94.2
1919	48.6	65.2	74.3	87.0	97.0

This report of the National Bureau of Economic Research also discloses the fact that in general people who work for themselves work longer hours than those who work for some one else; also that the industries carrying the greatest number of workers require fewer hours per week than those who employ smaller numbers. Only in concerns employing more than one hundred men was the forty-eight-hour week general.

There are one or two problems which ought to be discussed in connection with the reduction in the hours of work, though we can give them but very brief attention here. One of these has to do with industries whose operations are necessarily continuous—steel-making, cement-making, and a number of others—which cannot shut down completely in any part of the twenty-four hours of the day. Here the problem of the reduction of hours is complicated by the need for introducing the shift system and by the fact that when there is a reduction it is a very important reduction and cannot be carried out gradually. When, for instance, hours in a steel industry were recently reduced for some workers from twelve to eight, there was a shift of four hours per day per worker and the question naturally rose as to whether workers were to be paid for an eight-hour day as for a twelve-hour day or whether they were to be paid at the same rate per hour as formerly. These problems have to be settled by a series of compromises, it seems. There is but one essential principle involved and that is that the industry to which a worker devotes his time and energies owes him an efficiency standard of living, whether he works eight hours or twelve hours. This responsibility of the industry cannot, in the long run, be evaded, so that usually industries which reduce their hours find themselves eventually compelled to pay as great a price for the service of labor for the shorter hours as they formerly had to pay for longer hours. This has been one element in causing the stubborn resistance of employers to the reduction in number of hours.

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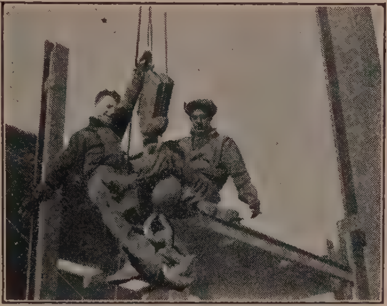
[7] *Employment Hours and Earnings in Prosperity and Depression* (McGraw-Hill, 1923).



Steel workers. (Photo Hine.)

There is some evidence, however, that the reduction in the number of hours worked does not in many cases actually reduce the output of the industry but may, in fact, increase it. This is because of the increase in efficiency of workers during the time they are at work and the elimination of the two fatigue periods in the hour before noon and that before closing time at night when production was at its lowest rate and accidents were at their highest rate. Obviously, however, the hours of work cannot be indefinitely reduced without reducing output. It might be possible for a group of workers to turn out as much product in *eight* hours as were turned out formerly in ten, but it is scarcely likely that it would be found that they could turn out as much in *six* hours as they did formerly in ten. On the whole, it is probably unsafe to put the case for reduction in the hours of work upon the ground of the increase of output, because, in the first place, it will be found many times that output is not increased, and in the second place, because there are so many other good arguments for reduction.

One of the other problems often pointed out in this connection has to do with overhead costs, that is to say the charges to be met by a business whether its plants are in operation or not, such as the depreciation of machines, the payments it must make for rent, and for officers' salaries and the like. These obviously are quite as great when the plants and machines are kept busy for six hours a day as they are when kept busy for the whole of the twenty-four hours. And with the modern tendency toward the progressive substitution of machine effort for human effort, there is an increasing pressure to keep the machines in operation the greatest possible number of hours; for even though the men who look after the machines get tired, the machines do not. A business executive feels himself, therefore, compelled to resist any movement which threatens to reduce the hours during which his plant and machines are kept in operation.

Still another problem is that of the seasonal trades, which are directly dependent upon ripening crops which cannot be efficiently stored, or are affected in a varying degree by the weather or the changing demands of the seasons. The seasonal fluctuation of the activities of these industries has in many cases been greatly reduced and the problem of overwork and long hours therefore mitigated; but there are many industries still, like the canning industry, which find it very difficult to avoid periods of feverish activity in one season of the year and periods of almost complete stagnation during other seasons.

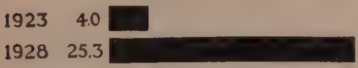
Steel-work on a bridge. (A Margaret Bourke-White Photo.)

This phase of industry has given rise to the considerable problem of casual labor—labor which wanders from job to job as work becomes available at different seasons. There are great numbers of these casually employed persons who drift from job to job in the spring, summer, and fall, and eke out a precarious existence in city lodging-houses during the winter months. The situation has been materially improved, of course, by the increase of machinization in industry and by the specific planning of different industries for the correlation of their necessary fluctuations so that the end of one employment may coincide with the beginning of another. In this connection, we may again mention the necessity for government labor exchanges as well as the need for the better coördination among private businesses. Problems like this become social problems as well as industrial ones.

Another way in which this seasonal production has been to a certain extent mitigated has been by the superior methods of storage and utilization of ripening crops and by the distant anticipation of seasonal demands. We have learned by the use of refrigeration on a grand scale to store apples as well as wheat, and we have learned to anticipate throughout the year the fact that in June people will desire new straw hats and that in October they will desire new overcoats.

At work in a steel mill. The haziness in the picture is caused by the smoke these workers always breathe. Tuberculosis incidence is very high in such occupations. (Photo Hine.)

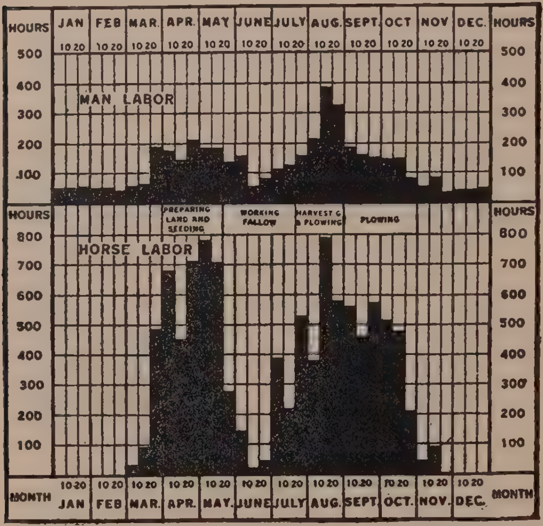
All of these various considerations would have to be admitted to the solution of the problem of hours of work. So long as we have an industrial system which operates in a pecuniary economy, business men will be forced to think first of ways in which they can cut their costs and raise their selling prices, and we shall probably find them on the whole opposing reductions in the hours of work, even though, from the social point of view, these may appear to be incontestably beneficial. Nor can we blame them. There must simply be a recognition that in some matters, at least, social considerations are more important than business ones and that where this is true business will have to give way before the demands of human welfare.



Thousands of combines produced in the U. S. 1923 and 1928. Each new combine meant less work for casuals in the harvest. (Data from *Commerce Year Book*, Vol. I, 1929.)

This is the background in which legislation for the regulation of hours of work is taking place. The proponents of regulation of the hours of work say that it is better to embody these regulations in law so that all employers shall be treated alike and no one shall possess an advantage over any of his competitors because of his greater unscrupulousness concerning the welfare of his employees. Opponents of such legislation on the other hand, point, among other things, to the impossibility of making a flat standard, saying very truly that individuals differ in their abilities to resist fatigue and in the enjoyment they get from their work. Also it is said that industries differ, and necessarily so, in their monotony and various other strains and therefore in the proper number of hours of operation.

Aside from the involved legal and constitutional questions concerning the regulation of hours of work, into which we shall not go here, we can say that there is something to be said both for and against legislative interference; but we should perhaps not find much disagreement in general opinion about the wisdom of setting up certain minimum standards to which industry should have to hold, or about the general principle that industry ought to require from the individuals employed in it only so much effort as they can spare from the other ordinary normal activities of life.

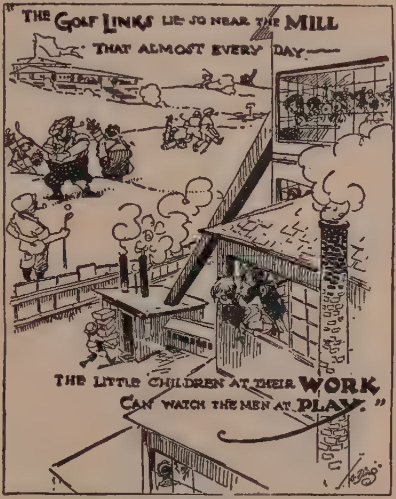


Here we have a picture of the more or less regularly recurring seasonal demands for labor of men and horses in wheat farming. Planting and harvest require many times the men and horses used during the rest of the year. What to do with them the rest of the time is a problem. The industry accepts the responsibility for feeding and housing the horses all year round—whether there is work or not. But the men who work in the harvest have to shift for themselves in slack seasons. (Reprinted from U. S. Dept. of Agr. *Year Book*, 1917, Separate 758, "A Graphic Summary of Seasonal Work on Farm Crops," by O. E. Baker, C. F. Brooks, and R. G. Hainsworth.)

It may indeed be that the hours of work in some occupations may be lengthened instead of shortened. In time, when we come to a comparison between the desirability of the activities of work and of those of leisure, with industry reconstructed on the model of the best examples which can be seen now, it may very well be that men will prefer their work to any activity of leisure. Such would be the ideal, of course, but it is perhaps not to be expected that this will happen in many cases or that it will happen even in those few cases soon.

4. *Woman and Child Labor*

The more controversial questions have to do with the delimitation of the respective regulating spheres of the states and of the Federal government. In spite of the decision of the Supreme Court that Federal regulation of child labor is unconstitutional, there are many who are dissatisfied with the decision and expect or hope that at some time in the future it may be revised


"THE GOLF LINKS LIE SO NEAR THE MILL
THAT ALMOST EVERY DAY—
THE LITTLE CHILDREN AT THEIR WORK
CAN WATCH THE MEN AT PLAY."

A cartoonist's view of the controversy over child-labor regulation. It was in a cotton-mill town that Sarah Cleghorn wrote the piercing lines around which the cartoonist has arranged his ironical picture. (© 1928 N. Y. Tribune Inc., Courtesy N. Y. Herald Tribune.)

and that instead of separate states the Federal government may accept this responsibility. About the regulation of adult men's or women's work there is also controversy, but not of the same sort. It is not clear whether the Federal government could step in if it should seek to do so; but it is fairly clear that it will not do so in any immediate future. These latter, then, are problems which clearly concern the separate states and not the Federal government. We have already spoken of the confusion of practice and the absence of statutes so far as concerns the working time of adult men. For women the situation is different. It is more generally admitted to be harmful for women to work immediately before and after childbirth; and even on night shifts in general. And these are the usual prohibitions. Massachusetts, Connecticut, and New York forbid all night work. In many states there are limits to the hours per week. The following shows the maximum hours allowed in several states for contrast:

Massachusetts	48
New York	49½
Arkansas, Maine, New Hampshire, New Jersey, Oklahoma, Pennsylvania, Texas, Rhode Island	54
South Carolina, Connecticut	55
Vermont, Georgia, Kentucky, Louisiana, Mississippi, North Carolina	60

In Alabama there has been no limitation.[8]

However we might disagree about the regulation of the hours of work for men in industry, or even for women, scarcely anyone would argue that the unregulated labor of children is a good thing. There is at the present time a considerable movement toward its complete abolition. When we come to consider the fact that in the United States in 1920 more than a million children between ten and fifteen years of age were reported by the census enumerators as engaged in gainful occupations, we begin to see the necessity for some kind of legislative limitation. This number was approximately one-twelfth of the total number of children of that age in the entire country. It is to be remembered also that the census does not report the number of working children under ten years of age. It is known that such children are employed in large numbers, particularly in agriculture, in street trading, in domestic service, and in industrial home work.

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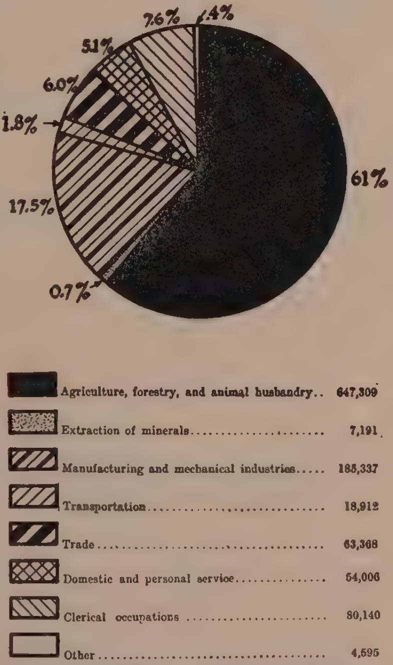
[8] The heavy weighting of Southern states among those with high or no limits is noticeable. This is characteristic of conditions in the areas where industrial unrest becomes, every now and then, outright rebellion. Long hours, low pay, poor conditions, have characterized the rise of industry in the South as they have in so many other similar regions in a like period of change.

The problem of child labor is greater for boys than for girls, as might perhaps be expected. There are indeed nearly twice as many boys employed as there are girls. The diagram on the following page shows the proportion of children engaged in each of the principal divisions of occupation in the country. It is perhaps notable that although by far the greater number who were listed as gainfully employed were employed in agriculture, there were still a significant number employed in factories, particularly in the textile industries. What work in the cotton mill does to the health and the future manhood or womanhood of boys or girls is too well known to need comment here. It not only interrupts their physical growth and in a very large percentage of instances causes the weaknesses which predispose them to many of the most fatal diseases of childhood, but it also interrupts their mental growth and the possibility of their becoming educated for any calling beyond that into which they have originally gone. This obvious consideration led to the passage of a large number of state laws concerning child labor and ultimately to the passage of two congressional acts forbidding child labor in factories whose products were to enter into interstate commerce.

Types of rural and urban child labor. Topping beets (right) is heavy work and dangerous because of the liability of accident. Children become weary and the slip of a knife means a lost finger. Selling newspapers (left) very often necessitates night hours and places the child in an environment detrimental to health and morality. (Courtesy National Child Labor Committee.)

Most unfortunately, both of these acts of Congress were declared unconstitutional by the United States Supreme Court. "Most unfortunately," because the standards of the states were so different and because the standards tended inevitably to be those of the most unscrupulous state. Obviously, employers operated their factories at less cost when they could employ children at their small pay to do the work which would otherwise have to be done by adults, and this gave them considerable advantage, perhaps, over employers in a similar industry in another state whose standards were higher. This led to a pressure upon the legislatures of the states with higher standards to reduce them to the level of the lowest. It was therefore thought desirable to make a standard to which all of them would have to conform. Since the declaration in 1922 of the unconstitutionality of the last federal child labor law of 1918 a number of resolutions have been introduced into Congress for the amendment of the constitution to permit Congress to legislate in the matter of child labor, one of which has recently been submitted to the states for the approval of the necessary two-thirds majority of the legislatures. Enough have refused ratification to make its failure certain. And so the matter stands at present, with rules for the mitigation of child labor at the discretion of the state legislatures.



Children in industry. (Based on statistics of the U. S. Children's Bureau.)

5. *Minimum Wage Legislation*

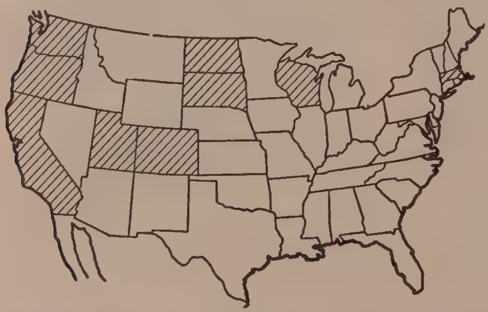
The argument for fixing levels below which wages may not be paid is well summarized in the report of the director of the New York State investigation into the need for them:

"The results of the investigation have proved conclusively that half the workers in low-skilled lines do not receive sufficient wages to sustain themselves independently nor to support their families properly. Although the earning capacity of most workers is relatively high, the large numbers of young women who live at home and the constant influx of immigrants with low standards of comfort depress the rates of wages. Moreover, irregular employment entails great loss of earnings and promotion is generally slow and uncertain even for steady workers with years of experience.

"The rates fixed by many establishments are not based upon a consideration of the needs or efficiency of the workers, nor upon the capacity of the business to pay more, but upon the judgment of an individual manager and the custom in the trade.

"Because of their youth, their inexperience, and their timidity, most workers can not individually secure advancement; because of lack of organization they cannot obtain trade agreements upon wages. Meanwhile this situation of a great multitude of underpaid working people has a direct bearing upon the growth of poverty, vice, and degeneracy throughout the community. If employer and employee will not unite to remedy conditions, the State must act in order to secure public welfare."

The results to be expected are summarized in the findings of an investigative commission in Massachusetts whose survey preceded the passage of the Massachusetts law in 1912:



Minimum wage laws for women in the United States, 1929. Those states which are shaded have some form of minimum wage laws for women.

"1. It would promote the general welfare of the State because it would tend to protect the women workers, and particularly the younger women workers, from the economic distress that leads to impaired health and inefficiency.

"2. It would bring employers to a realization of their public responsibilities, and would result in the best adjustment of the interests of the employment and of the women employees.

"3. It would furnish to the women employees a means of obtaining the best minimum wages that are consistent with the ongoing of the industry without recourse to strikes or industrial disturbances. It would be the best means of insuring industrial peace, so far as this class of employees is concerned.

"4. It would tend to prevent exploitation of helpless women, and, so far as they are concerned, to do away with sweating in our industries.

"5. It would diminish the parasitic character of some industries and lessen the burden now resting on other employments.

"6. It would enable the employers in any occupation to prevent the undercutting of wages by less humane and considerate competitors.

"7. It would stimulate employers to develop the capacity and efficiency of the less competent workers in order that the wages might not be incommensurate with the services rendered.

"8. It would accordingly tend to induce employers to keep together their trained workers and to avoid, so far as possible, seasonal fluctuations.

"9. It would tend to heal the sense of grievance in employees, who would become in this manner better informed as to the exigencies of their trade, and it would enable them to interpret more intelligently the meaning of the pay roll.

"10. It would give the public assurance that these industrial abuses have an effective and available remedy."

In 1923 the Supreme Court held the statute for the District of Columbia to be unconstitutional. There were several years of controversy before this decision interrupted progress toward wage protection.[9] At that time 13 states, Porto Rico, and the District of Columbia, had passed legislation of this sort. The decision ended, for the time being, the effort to establish statutory minima for adults; it did not, however affect those provisions of existing laws which applied to children. Some of these are still in force; two apply only to girls and fix rates directly in the law; ten others empower commissions to establish conditions and rates of pay for children.

Sweated home labor. (Courtesy *The Survey.*)

It is easy to see how the regulation of conditions of work for children and some protection for them in their bargaining with employers falls more easily into our traditional conception of the relation of government to the individual. Children are more helpless; and American as well as British industry has a bad reputation for exploiting childhood. It strikes us in a soft spot; and we become indignant. Yet there is frequently very little practical difference in the situation of children and adults in this respect. Many grown persons are nearly as helpless in the wage bargain as any child could be; and the facts we have concerning the wages paid in many of the less skilled occupations show the results of this weakness. These conditions do not exist because those occupations have to be so ill-paid, but because employers do not have to pay more for workers. And even if we feel no concern for the individual involved there are still deplorable social consequences from which we should like to escape if we could. If the establishment of statutory minima would reduce the consequences we deplore, the strength seems strange and unaccountable with which we cling to the doctrine of individual responsibility in the face of probable betterment.

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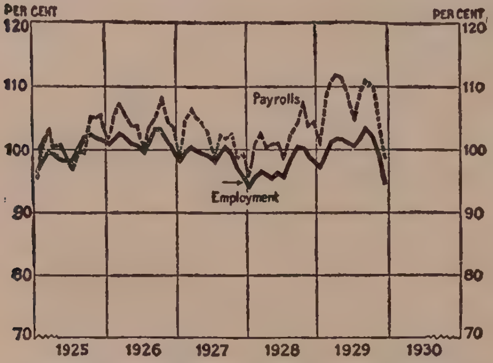
[9] *Minimum Wage Laws of the United States*, by Lindley D. Clark. Bulletin of the Bureau of Labor Statistics, No. 285. Recent developments are reported in the *Monthly Review* of the Bureau of Labor Statistics and in the *American Labor Legislation Review.*

6. *Unemployment and its Relief*

In the chapter which was devoted to the description of life on the poverty level the problem of unemployment was referred to: certain statistics were cited which revealed something of the probable numbers of the unemployed. But very little was said concerning the causes of the situation, nor of the suggestions which are commonly made for its relief.

One large cause, if we think of causes in a general sense, is to be found in an analysis of why it is that production is sometimes large and sometimes small. A reduction in industrial activity obviously entails a reduction in the number of workers required. These rhythms of prosperity and depression are described elsewhere; we would only remind the student, at this point, that they may be general—and so affect all industry—or special—and so only affect one or a few industries. A good illustration of the former situation is furnished by the figures we cited earlier, showing a rise in the percentage of the unemployed of from 5.1 in 1920 to 15.3 in 1921. There were similar, though less marked, increases in the years 1924, 1927, and 1929. An illustration of the latter condition is furnished by the situation, in recent years, of such industries as the manufacturing of textiles and coal-mining, where production, and consequently employment, has been reduced considerably from former higher levels.



Index numbers of factory employment and payrolls, without adjustment for seasonal variations (1923–25 average 100 per cent.) (From *Monthly Review*, F. R. Bank, February 1, 1930.)

We shall not attempt to make any quantitative attribution which would show the importance of any one cause. That would be impossible in the present state of our knowledge. But there is at least one other general situation to which reference must be made in any discussion of causes. This is usually called "technological unemployment." Two strangely contrasting phenomena have come to the notice of economists very conspicuously in recent years. One of these is an increase, of considerable proportions, in the average productivity of industry; the other is an absolute decline in the numbers of the "gainfully employed" for the same period. The index of production of the Federal Reserve Board which covers 80 per cent of the total industrial production of the country, showed an increase of 20 per cent between 1919 and 1926 and there has been a similar increase since. In contrast with this, there was for the same period an absolute decrease of something like 10 per cent in the average number of those employed in manufacturing industries; this, in spite of the fact that a large draft of workers came into the cities each year from the farms, and that the population increased regularly. A recent report of the Secretary of Labor to the Senate recorded a loss in employment in manufacturing industries of 1,874,050 between 1925 and 1928.[10] Well over one million of this loss must be attributed to the substitution of machines and power for hand work, and the failure of other employments to substitute for those which have been lost by these workers.

This presumably is not a new phenomenon; it must have been going on at a more or less rapid rate since the beginning of the industrial revolution; but the rapid technical advance of American industry during the war and since seems likely to have accelerated the processes to a pace never before known. It is not a cyclical phenomenon; it is one which is continuous, but which goes on at varying rates at different times. We are in the midst of one of the most rapid changes of this sort which has ever been known.

These social casuals need closer analysis than they have ever had. Perhaps Carleton H. Parker's *Casual Laborer* (Harcourt, Brace, 1920) came closest to explaining them; but in any case we can say that the man on this bench is down on his luck. Perhaps he was born deficient, perhaps ill health and industrial strain have used him up. In any case it is an evasion of social responsibility to leave him sitting here. (Photo Hine.)

The general depression of the year 1921 hit agriculture first and hardest, and, when the recovery began, agriculture failed to make the gains which were expected and which were made in other fields of industrial life. The depression continued in agriculture and is still serious. We are not here concerned primarily with this depression. Unemployment is not usually thought of as an agricultural problem; but some aspects of the agricultural situation are germane to this question. In New York state, for instance, the farms contributed to the cities some 320,000 persons in the eight years previous to 1928. During that period, the population on the farms declined only 44,000. The farms also produced more workers than they could employ. The situation in New York state is typical of others. During this same period, 266,000 hired men and boys left farms in New York state to do work other than farming and only 101,000 left other kinds of work to go farming, leaving the net movement from farms to cities of 165,000 male workers.

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[10] This figure for "loss in employment" was widely interpreted at the time as representing the number of unemployed. This is a confusion which should be guarded against.

Reports of the Department of Agriculture indicate that this situation was general. At least a quarter of a million people have been lost to the farms, as an average, in each of the last ten years. This net loss for the farms and gain for the cities varies in different years. In 1922, for instance, it rose as high as 460,000 persons; in 1925, it was 479,000; in other years, it was somewhat less. At any rate the increase of potential workers in the cities is very appreciable. It represents an addition of the total of those unemployed somewhere in the country: since the figures which were cited from the Federal Reserve Board covered 80 per cent of production, this number, somewhere around a million since 1925, cannot have found places in the unreported 20 per cent of industrial activity.

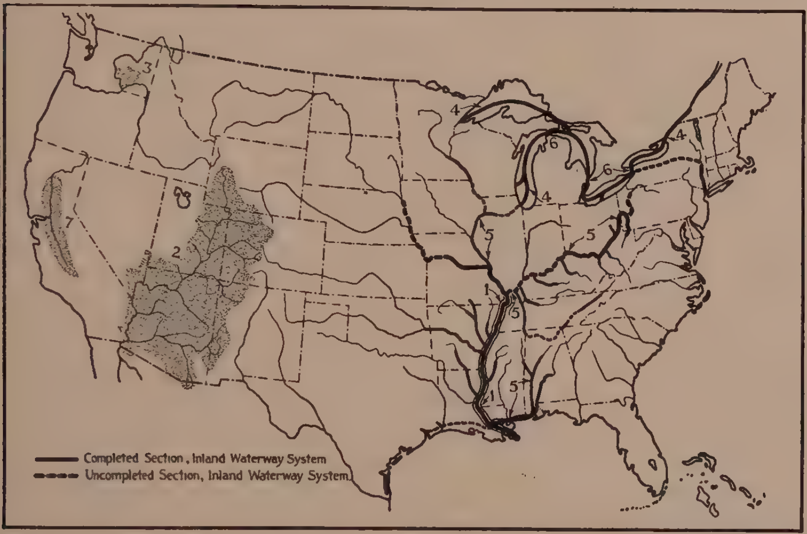
Evidently a solution of the farm problem would not only solve the problem of bettering life in that particular field but would also assist in relieving at least part of the difficulty with which city workers are faced. Farm relief may seem a rather roundabout way of relieving urban unemployment but there is no denying the validity of these figures and they point to one real and obvious means of doing something practical. Farm relief would also help in other ways. If it served to regularize the farming business, it would increase the opportunities of employment there and tend to keep workers at agricultural tasks; but it would also furnish an expanding market for industrial goods and so would tend to increase industrial as well as agricultural activity.

The rate of increase in population in the United States is about two per cent per year. This would involve the coming to working-age of something over two millions each year. Of these a certain large percentage, difficult to estimate accurately, would ordinarily join the number of those employed. With industries showing a decrease in employment, either these new additions to the working population must have found it impossible to find jobs or they must have replaced others who were already working. This is a source of unemployment also which is continuous and not subject to cyclical or seasonal variation. This new group seeks employment year after year and unless there is an expansion of working opportunities, must fail to find a place in industry.

Legislation has, in recent years, cut down the net total of those of working age who can come to the United States seeking employment, but the number of those who do come is still appreciable. The net increase during 1927, for instance, was some 250,000 of whom perhaps sixty or seventy per cent would normally seek employment. Either they must have been unable to find it or else they must have replaced others who were already working.

All of these have undoubtedly been factors in the creation of an unemployment problem which by now has grown to such a size as to press for relief. There have been additions to working opportunities which make places for some, at least, of these unemployed. The automobile, radio, and other new or expanding industries such as public utilities have increased the numbers of those engaged in the rather indefinite occupations we call "salesmanship" and "service." Then too a larger number of older children and adults are engaged in educational enterprises. And there are doubtless other new occupations which have absorbed workers. But the evidence is sufficient to establish the belief that the percentage of unemployment has increased and is still growing.

Presumably those measures for stabilization and coördination which have been outlined in our former chapters would assist in avoiding variations in the rate of industrial activity such as are indicated here. At any rate much could be done, by governmental interference, to prevent the burdens of progress from falling so heavily on the shoulders of the workers displaced in the pressure for increased efficiency.


Completed Section, Inland Waterway System
Uncompleted Section, Inland Waterway System
3
2
7
4
6
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1

The Inland Flood Control and Waterway System—such projects are only possible on a huge scale and with a long future period in view. Only government can undertake such work.

The projects embraced in this program are indicated by the numerals on the map as follows: 1—Flood control of the Mississippi. 2—The Boulder Dam project, which includes flood control of the Colorado. 3—The Columbia Basin reclamation project. 4—The Great Lakes—St. Lawrence waterway to the sea. 5—The inland waterways system. 6—Regulation of the levels of the Great Lakes. 7—The reclaiming of the arid lands of the Sam Joaquin and Sacramento Valleys.

The heavy lines on the map indicate the extent of the proposed inland waterways system, the full lines showing the sections already completed, the broken lines those sections which are uncompleted; the light lines paralleling the Mississippi River designate the Protective Levee and Spillway System. The shaded areas on the map show the territory affected by the Colorado, Columbia and Sacramento-San Joaquin River irrigation projects. (Adapted from material in *N. Y. Times*.)

It has been many times suggested that those who are thrown out of work during slack periods of industrial activity might be cared for by arrangements to have public work of all kinds expand during those periods. Industrial depressions recur with fair regularity. Slack times are expected to follow those during which activity is more general. There would seem to be no good reason why this normal expectation should not lead to a more regular provision of work, which needs to be done anyway, during the slack periods. Work on public buildings of all sorts, reclamation and irrigation projects, road building, river and harbor improvements, improvements to national parks and other parts of the public domain are all susceptible of the sort of regulation which would bring relief during periods of unemployment. Suggestions of this sort have been made again and again. Mr. Hoover, himself, has referred to the possibility, but the government, actually, has done very little in this direction.

The suggestions already made have had to do with the avoidance of cyclical unemployment or for the provision of employment during slack times. These would care, more or less, for those who are temporarily thrown out of work because of recurrent industrial depressions. But, as has already been indicated, there are many more unemployed than would fall into these categories. The most important group is those who are deprived of work by the substitution of machines and power for their labor. When a thing of this kind occurs in an industry, it is because machines operate more efficiently than men. Costs of production are decreased. Part of the gain from this may be passed on to consumers in lower prices; part of it may be distributed to shareholders in the businesses as profits. The loss involved is borne by the displaced worker. It seems a rather obvious duty of those who gain from this substitution process to bear at least part of the burden of the losses which are involved. For this is a situation in which all the losses are borne by one group and all the gains go to another. The only feasible way of transferring part of the profit from those who gain to those who lose is by the mechanism of social insurance. It seems entirely legitimate for the government to subtract from the surpluses of industry a sufficient amount to meet the requirements of those who are thus thrown out of employment.[11]

The difficulties with unemployment insurance are obvious. Unemployment does not occur in all industries simultaneously. Also part of it is due to increase in population, part to the drift of farm workers into the city, and part to immigration. It might be possible to work out a scheme of contributions from those industries which actually do displace workers by machines. But frequently it occurs that workers are not so much displaced as shut off from further employment. Those who are now at work are not discharged; but no jobs are provided for an increasing number. On the whole, it has never seemed feasible to discriminate among the groups of the unemployed.

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[11] It must be obvious that we are avoiding discussion here of some involved economic and administrative questions. We simply follow the rule that if it seems wise to do something ways can be devised to do it.

A further question arises as to whether such insurance ought not to be provided rather by the states than by the Federal government. There are a number of reasons why the Federal government would function more efficiently in this matter than the states. For one thing, industries do not conform to state boundaries. Their earnings may be reported in one state and the employment they cause may arise in a different one. For another, the expense of unemployment insurance would be a handicap to the industries of any state which undertook it alone, just as other forms of social insurance have proved to be.

There has, as yet, been no serious or widespread movement for the adoption of public unemployment insurance in the United States. Bills have several times been introduced into state legislatures but none has ever become law. There are two general kinds of plan in use in Europe where the experience with this type of insurance has been long and wide. By the first, unions, which have voluntary insurance, are subsidized. This was sometimes done by municipalities, sometimes by nations. It was formerly used in France, Denmark, and Norway and in cities of Belgium, Germany, Switzerland, and Italy. Since then national schemes have been adopted in the Netherlands, Finland, Spain, Belgium, Czechoslovakia, and Switzerland. The other sort of scheme is universal compulsory unemployment insurance. In Great Britain it was put into effect in 1912. Other countries which have adopted it are Russia, Austria, Queensland, Poland, Bulgaria, and Ireland. There is a slight difference in Germany where the worker does not necessarily receive payment because of unemployment but only when the authorities discover his family to be destitute. It is usual for employer and employee to contribute equal amounts and for the state to add something. In the United Kingdom, for instance, the state adds one-third more.

For those who are coming into industries for the first time, either as maturing members of the American population or as immigrants from other countries, a good deal might be done in the way of preparing them for specific occupations which are likely to show an expansion of employment. A good deal of work of this sort is being done in such countries as England and Germany. It offers no immediate relief, of course, but is one of those long-run measures which are necessary if we are to arrive at any permanent solution of a problem which threatens to become more and more serious as time goes on.

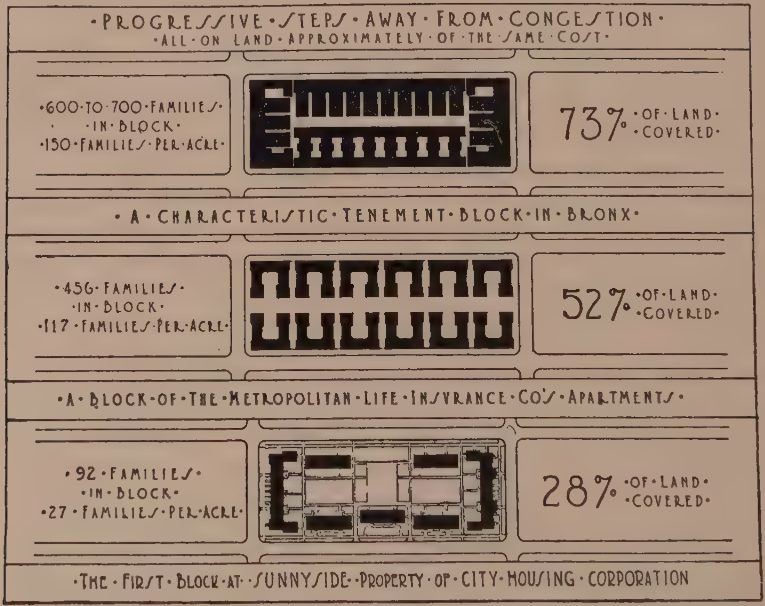
The present difficulties amongst those who desire for one reason or another to know the amount of unemployment there is in the United States is a good illustration of a need which arises again and again. We have no means, at present, of knowing how many there are in the country who are at any one time out of work. The best estimates which can be made are, after all, only estimates. The Federal government could correct this situation by expanding the service of the Bureau of Labor Statistics in such a way as to keep a running inventory of those who are employed and those who could be employed if there were openings.

CHAPTER 25

IMPROVED STANDARDS OF HEALTH EDUCATION AND RECREATION

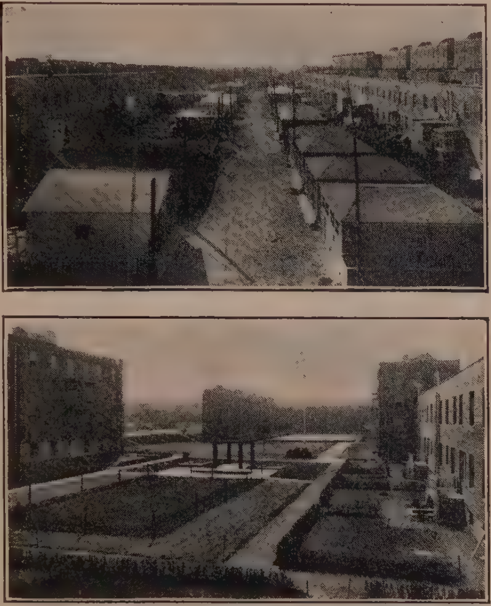
1. *Health*

In considering the possible ways in which the urban working life may be and is being improved, it is of first importance to consider the measures being taken (1) to guard the health of the community and (2) to develop its education and (3) its recreational possibilities; and we shall see that these considerations, if viewed widely enough, cover very nearly the whole requirements for community planning and improvement.


PROGRESSIVE STEPS AWAY FROM CONGESTION
ALL ON LAND APPROXIMATELY OF THE SAME COST
600 TO 700 FAMILIES IN BLOCK
150 FAMILIES PER ACRE
73% OF LAND COVERED
A CHARACTERISTIC TENEMENT BLOCK IN BRONX
456 FAMILIES IN BLOCK
117 FAMILIES PER ACRE
52% OF LAND COVERED
A BLOCK OF THE METROPOLITAN LIFE INSURANCE CO'S APARTMENTS
92 FAMILIES IN BLOCK
27 FAMILIES PER ACRE
28% OF LAND COVERED
THE FIRST BLOCK AT SUNNYSIDE PROPERTY OF CITY HOUSING CORPORATION

How a coöperative group propose to reduce urban congestion. This chart shows the relative areas of free space at Sunnyside, a block at the Metropolitan Life Insurance Company's apartments, and a typical block in the Bronx. (Courtesy City Housing Corp.)

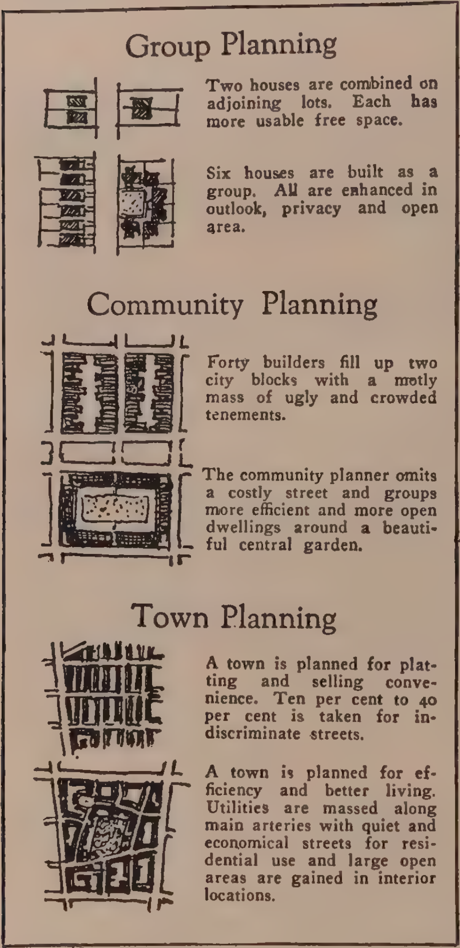
In considering what is necessary to be done in order to raise the standards of health, for instance, we must first consider what are the enemies of the health of the community, and when we analyze the situation from this point of view it becomes apparent that such factors as the congestion of population which has followed from the growth of market centers and factory districts is quite as responsible for disease and misery as faults attributable to individuals themselves. And any attempt to raise the standards of health would necessarily have to begin with the improved planning of not only the houses in which people live but of whole neighborhoods, even possibly cities or towns. Socially minded persons have not been slow to sense this, and a great deal of attention has been given in recent years to the problem of town and neighborhood planning, even to the extent, in some cases, of starting all over anew and building whole cities where none existed before.



Contrast between the use of open space in the interior of a block at Sunnyside (lower) and the arrangement in a typical speculative development near by (upper). (Courtesy City Housing Corp.)

What is necessary to be done is really staggering when one considers from this angle the modern city which has grown up haphazard at the junction point of several streams of commerce, with houses and factories, office buildings and warehouses all intermingled and the whole making an unplanned hodgepodge. In order to remake such a city—and this is a true description of most of our modern cities—it would indeed be necessary very nearly to destroy the whole structure and rebuild from the bottom up.

The fundamental problem of town planning is implicit in the fact that towns and cities were founded in an age which had no prevision of the developments which subsequently took place. New York City for instance is fundamentally wrongly designed with many narrow cross streets running across Manhattan and few wide avenues running the length of the island. It was thought by designers that the rivers on either side would take care of up and down communications. The situation, of course, for modern requirements, ought to be exactly reversed. The present street congestion and housing difficulties follow directly from this unfortunately wrong basic plan. But other cities are scarcely better off. When we find whole blocks, for instance, as we do in all cities, filled with houses, and with no other area for recreation or garden space than is furnished by the street itself, the inference is easy that the situation came about through haphazard growth rather than any kind of planning. It must be admitted not only that this occurs in all American cities but that it is nearly all one can find in any city. However, if we look about for better examples, they are not difficult to find after all. And just as we should not expect the best and most modern type of factory to be the most prevalent type, so we do not expect the best type of community center to have spread everywhere in the few years since its conception.


Group Planning

Two houses are combined on adjoining lots. Each has more usable free space.

Six houses are built as a group. All are enhanced in outlook, privacy and open area.

Community Planning

Forty builders fill up two city blocks with a motly mass of ugly and crowded tenements.

The community planner omits a costly street and groups more efficient and more open dwellings around a beautiful central garden.

Town Planning

A town is planned for platting and selling convenience. Ten per cent to 40 per cent is taken for indiscriminate streets.

A town is planned for efficiency and better living. Utilities are massed along main arteries with quiet and economical streets for residential use and large open areas are gained in interior locations.

(From *The Survey Graphic*, May 1925. Used by permission.)

The actual problem of housing, it will be seen, is quite a different one from that of city or town planning. The one has to do with the whole community; the other with the actual housing of the individual family group. More and more, good housing for the family depends upon good community planning, however, so that in the modern town or city the two come to be directly related. The actual provision of housing facilities becomes increasingly a matter of public interest. But as yet no American city has taken other than negative responsibilities in the matter. Usually cities define certain minimum standards which are intended to protect health, but stop there. Some cities abroad have gone further and, where housing facilities provided by private capital were inadequate, have started upon building programs of their own.

There has, however, in America, been a considerable movement toward what are called "company towns." These include some of the best and some of the worst symptoms of our civilization. Some of them are of a type calculated to discourage all impulse toward home betterment, presenting, as they do, rough and drab exteriors, and interiors without the meanest contrivances for comfort. Some are so planned and constructed as to far surpass the ordinary arrangements for beauty and utility of the independent village or city. The great pervading difficulty with the older type of industrial town was the tendency toward monotony of design and the building of row upon row of houses of unrelieved sameness. That this feature is one easily escaped from, is apparent, however, from the study of some successfully planned communities of this sort.[1]

Bad conditions in company housing, too frequently found in mining and other communities. (Photo Hine.)

There are subsidiary problems involved in the system of "company towns" such as the important one of the fuller control given the employer over his workers when they not only work in his factories but also live in his houses; but this does not change the fact that in the better type of company towns, the actual housing and the community facilities are both better physically provided for than is ever true in the haphazard towns and cities characteristic of our age.

Good company housing. These two pictures represent extremes. Most projects would fall between these examples. (Courtesy Kohler Company.)

That there is active thought and study being given to the problem, indicates that sooner or later a means will be found to reconstruct cities and towns after the model of the best examples we have at present. The fundamentals to be observed in any kind of town or city planning are the guarding of air, light, and space. This may be accomplished, for instance, in an industrial center either by making the factory the center of a garden city of its own and developing there a company town, or by banishing the factories to a place reserved for them and keeping certain sections of the city for purely residential purposes. Both of these plans have some adherents. Neither of them, of course, is exactly typical of the situation met with in most American cities, for most of these are not only industrial centers but market centers where much trading is done and where there are many organized markets, and, consequently, many crowded office buildings huddled together in one section of the city.

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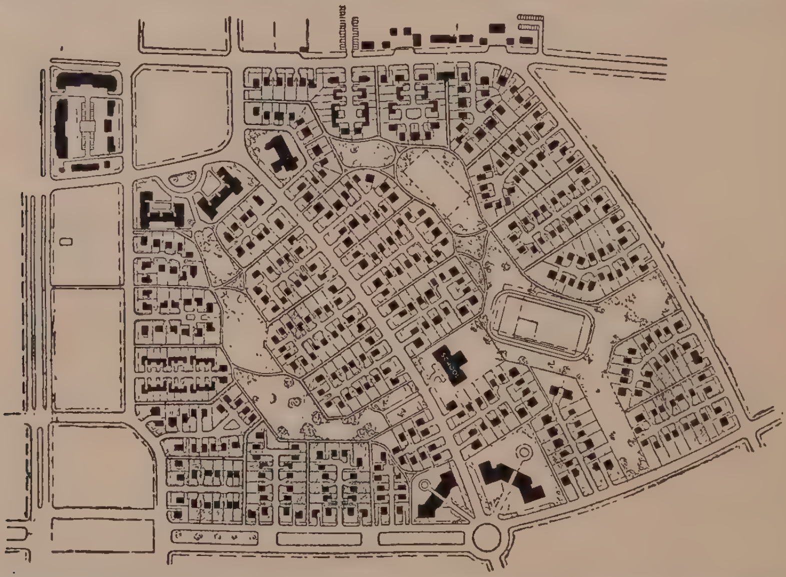
[1] For a fuller discussion of this subject the student is referred to Leifer Magnusson, *Housing by Employers in the United States*, Bulletin of the Bureau of Labor Statistics, 263. A full bibliography will be found on pp. 248 ff. of that book.

Assuming that it is necessary for this crowding to take place on account of the necessity for market functions to be carried on within a very circumscribed area, it is still possible to plan for and to create suburban residential sections with very cheap or even wholly free transportation from the center of the city to them. This latter plan is perhaps more common on the continent of Europe than anywhere else and there has excellent results.



An architect's sketch of two super-blocks at Radburn, N. J., showing houses in solid black, and the system of closed-end streets, pedestrian paths, and interior parks. Children have no streets to cross in going to school. (Courtesy City Housing Corporation.)

American cities cannot be said to have taken very seriously as yet the responsibility for physical improvement which grows more and more pressing every year with the concentration of population and with the changes in industrial and automotive technique that make the old basic plans more and more antiquated for human purposes. Even the city of Washington, if we except the official sections of the city, displays many of the familiar attributes of other American cities, in spite of the fact that from its very beginning Washington has had one of the finest civic plans conceivable under the circumstances; and if this is true of Washington it is far more true of New York City, Chicago, Philadelphia, San Francisco, and the other great cities of the country. Certainly many of these cities, notably Chicago, have become somewhat self-conscious about the way in which their greatest avenues have been misused and have attempted to lay down certain minimum requirements which mercantile houses and office-building corporations must adhere to; and New York City has attempted to establish certain city zones in which buildings would have to conform to certain standards intended to protect the community; but all of these attempts have been so very partial that they barely touch the heart of the problem, which is, of course, the protection of the masses of the community against the consequences of overcrowding and badly planned facilities for modern life.

It is expected that New York will grow out into Westchester County. Meanwhile the residents of the County are protecting, by an elaborate park system, what they call "the most beautiful county in America." (Adapted from a map of the Westchester Park Commission.)

In this connection, it is perhaps well to mention the great effort that has been made by the Regional Plan of New York and Environs to survey the situation so far as New York City is concerned and to lay plans for its development for many decades ahead.[2] This survey is being carried out with the most meticulous care, and will, when it is finished, furnish the basis upon which the community can build up an ideal plan if it shall care to do so.

Greater progress has, however, been made in Chicago under which is called the Chicago Plan, than in any other American city. Great drives through and around the city, some with double levels, are in course of construction, and a comprehensive scheme for the grouping of public buildings and caring for public services is in process of completion. Other cities, however, Detroit, Los Angeles, and Philadelphia among them, are finding themselves forced to consider the means at least for the relief of congestion if not for beautification. None of the so-called "city plans" contemplate any relief for home-makers; only streets and public buildings.

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[2] Cf. *Mastering the Metropolis*, by R. L. Duffus, 1930.

So far as the actual housing of the community is concerned, there are two alternative possibilities. Either the community will be content to live in apartments or it will find it possible to keep to the older ideal of detached houses with some space around them. We can see both of these types of housing at the present time. The apartment-house idea has grown very rapidly, so rapidly in fact that the necessary corollary developments have been very nearly altogether forgotten. It is just as necessary to have light and a certain minimum number of cubic feet of air space per person in an apartment as it is in a house, and it is no less necessary to have provision for outdoor recreation and for space for children's playgrounds. All of the apartment-house areas in most of our large cities are still woefully deficient in these respects, though there is at the present time a considerable recognition of the need and an attempt to remedy the situation. It is made more difficult by the fact that here as elsewhere we failed to plan sufficiently ahead. And so when it comes to establishing playgrounds for children in our cities, we find all the available space already preëmpted.

"Back-yard" scene in New York's tenement district. (Photo Hine.)

In spite of these drawbacks, the apartment has certain obvious advantages which have enabled it to grow at the expense of the detached house. It is more possible to develop coöperative services for heating; also for the provision of necessary household services, such as laundry and garbage removal; and it is possible to get a greater population into a given area. On the other hand, people cling to the older notion that *home* involves a *house*,

The fine sense of spaciousness and meticulous care—both in planning and maintenance—which was so characteristic of comfortable American homes in the past, is rapidly being lost. This is the bedroom of a house in Haverhill, Mass., from about the middle of the eighteenth century. (Courtesy of the Metropolitan Museum of Art.)

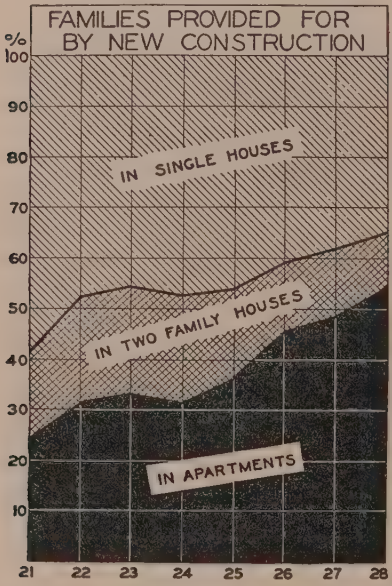
and are rather stubborn in the intensity in which they hold to this idea. All of our great cities, for this reason, are surrounded by immense areas of suburban homes which are built in the general fashion, though with far greater comforts and conveniences, of the farm home of former generations.

This reconstruction of the kitchen from the "Capen House," Topsfield, Mass., reveals something of both the hardships and comforts of Colonial life in America. How difficult it must have been to manage the numerous household arts with such equipment we can only imagine now; yet there is something here of homely craftsmanship and settled ways which we value in retrospect as we only value good things which are irretrievably lost. (Courtesy of the Metropolitan Museum of Art.)

The trend of events, however, is against even the suburban house. John F. Harbison, architect, of the University of Pennsylvania School of Fine Arts, comments on this:

"Large rooms and detached houses cost money—more of course than before—because the workmen who build them are paid higher wages than formerly. They, too, are demanding their share of the luxuries and comforts, and therefore the money that makes these possible. As a people we are choosing the smaller rooms, expensive comforts. We are spending money on a number of things our grandfathers did not have: a bath to each bedroom—this is certainly the tendency; a heat of more than seventy degrees throughout the winter; running hot water, day or night, and in quantity; excitement at meals—music; and our pleasures have become expensive; theater tickets now costing what would have been within the memory of man a week's wages of a laborer. Even our attempts at physical well-being cost money, it being essential that we wear the proper sports attire, and this always of the latest model.

"The old-fashioned kitchen has already gone. The dining-room is going; when a cubic foot of home costs so much, we naturally begrudge spending our money for a room which is really used so very little. Bedrooms will approach more and more the Pullman car compartment or the stateroom on a steamer, comfortable enough for the few hours we spend in them. There will no longer be a spare room; guests will go to a near-by inn; and of course a storeroom is an anachronism in this day, when we insist upon everything that we use being new. With the automobile at the curb, the home needs to be less a place to live in because it is so easy to get away from. There is more temptation to be always on the go and home becomes merely an overnight parking-place for the few hours after we finish our evening's entertainment and before the working part of the family must report at its place of earning its daily bread." [3]



In the diagram the figures at the left show the percentages, and those at the bottom indicate the years from 1921 through 1928. The black area at the bottom shows how the proportion of families accommodated by the new construction of apartments increased from less than 25 per cent in 1921 to over 50 per cent in 1928. The advance has been rapid and almost continuous.

The double cross-hatched area in the middle of the diagram represents the accommodations provided in two-family houses. These amounted to almost 25 per cent of all five years ago, but now they are not much more than 10 per cent. The top area represents the accommodations in single houses which were almost 60 per cent of the whole in 1921, but which have steadily shrunk until they amounted to only about one third of all in 1928. (From *Business Bulletin*, Cleveland Trust Co., August 15, 1929.)

One of the facts about housing that makes it seem particularly difficult is the declining proportion of families living in their own homes. This decline may be seen from the figures for various census years of the percentage of tenants in the whole number: 1890—52%, 1900—55%, 1910—58%, 1920—60%. Just to point the contrast: tenantry in France is, on a comparable basis, 20%.

The whole matter of community planning needs to be faced expertly and something more done than has yet been envisaged to bring home and community life up to a reasonable standard.

These are not the only considerations, however, which must be thought of in any discussion of improvement in the standard of health of the country. The general diet of urban peoples deserves discussion also. In this, as in the matter of housing, we inherit certain traditions—if not, as in the other case, institutions—and they are very nearly as hard to overcome, though a very rapid change is at present taking place. The old kind of diet for the typical American worker consisted of very heavy foods, largely meat and pastry. This diet was one which was calculated to sustain a man through the strenuous labor of a long farm day. It becomes a menace to the health of a city worker whose task is to bend above a machine or a desk rather than to handle a plow or a pitchfork. The number of calories needed by the average worker has been very nearly cut in two. The number of calories consumed has been nowhere near cut in two. But there has been a vast reduction in the consumption of meat and pastries in favor of a diet largely made up of cereals, vegetables, fruits, and sugar.

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[3] John F. Harbison, "The Automobile and the 'Home' of the Future," *Annals of the American Academy of Political and Social Science*, cxvi, 58–59 (November, 1924).

An industrial clinic. Another form of so-called "welfare work," appreciated by some workers, resented by others! (Courtesy Ford Motor Co.)

This improved diet cannot make its way too quickly throughout the body of sedentary workers everywhere. A notable fact in connection with this changed regimen is that it is one which is also very much more easily provided by nature than the old one. Meat and liquor were costly for nature to provide. Cereals, fruits, and sugar are provided with relative prodigality. The cost of an efficiency standard would be far higher than it is, if we still persisted in trying to supply the needs of the population with the old kind of diet, rather than the new one.

Along with these changes which are greatly affecting the health of the community has gone a great increase in the effort given to the study of public health. The new science of public health is conceived in entirely different terms than the old science of medicine. The idea of the old-fashioned physician was to make people well after they got sick. The whole idea of the public health doctor is to prevent them from ever getting sick. His activities are beginning to extend into all the departments of modern life which affect the health of the community. He is even beginning to have a say concerning housing and factory planning. A great many industries, for instance, maintain medical departments for the purpose of advising them in these matters. Many even maintain a visiting-nurse service which cares for employees when they are disabled through sickness.

But this is not only a matter which has received attention at the hands of private business. Municipalities and many other institutions, such as hospitals and schools, have gone in for the study of public health. They maintain many clinics which give free medical examinations and even provide, in many cases, free hospitals, especially for children. It is almost true to say that in any large city now, hardly anyone needs to be seriously ill without medical assistance of some kind. Necessarily, of course, this is hardly true of country districts where it is more difficult to maintain clinics and to provide examination and medical or nursing service.[4]

The growth of the numbers of hospitals and beds has been much more rapid than the increase of population. These are not all free to the public by any means, but many of them are.

GROWTH OF HOSPITALS, 1909 TO 1927[5]

Year	Federal Hospitals		State Hospitals		Other Hospitals		Total	
	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds
1909	71	8,827	232	189,049	4,056	223,189	4,359	421,065
1914	93	12,602	294	232,834	4,650	287,045	5,037	532,481
1918	110	18,815	303	262,254	4,910	331,182	5,323	612,251
1923	220	53,869	601	302,208	6,009	399,645	6,830	755,722
1927	301	60,444	592	354,786	5,914	438,088	6,807	853,318

It will be noticed from the accompanying table that there has been a growth not only of the number of beds available to patients, but also in the number of hospitals. "The important feature of this growth is that it has been widespread and has progressively meant the creation of hospital facilities where none existed before. Thus, the percentage of the 3,076 counties in the United States that have hospital facilities increased from 44 in 1920 to 57.4 in 1927. Much of this development has occurred in what were probably backward areas of the country.

RATIO OF POPULATION TO BEDS[6]

Geographical Division	1920	1925	1927
Total United States	340	291	270
North Atlantic	242	216	198
South Atlantic	508	407	430
North Central	355	301	267
South Central	705	544	508
Western	211	218	209

"Probably the most illuminating index of the growth of hospital facilities is the ratio of population to the number of beds for community use. In 1920 there were 340 persons per bed as contrasted with 270 in 1927. It is interesting to note that Wisconsin has the lowest ratio, closely followed by

[4] *Public Health in the United States*, by Harry H. Moore.

[5] From *Recent Economic Changes in the United States*, p. 20.

[6] From *Recent Economic Changes in the United States*, p. 21.

Nevada, Colorado, and California, and by New York, Massachusetts, and New Jersey. The states showing the highest ratio are South Carolina, Oklahoma, Georgia, Arkansas, Mississippi, Alabama, and Kentucky." [7]

As important also as the increase in the actual number of available facilities is the increase in efficiency which has taken place. One measure of this is the increased number of hospitals possessing clinical laboratories and X-ray departments. Between 1922 and 1927, the percentage of the former rose 43 per cent; and of the latter, 54 per cent. There were at the same time 2,091 physical therapy departments in 1927; and an equal progress in introducing occupational therapy, social service, dietary, and other departments.

The Medical Center in New York City is not only an excellent example of the new American architecture but also represents the new attempts which are being made to coördinate the agencies of public health and medical education. There are associated in this enterprise besides the College of Physicians and Surgeons of Columbia University, the New York State Psychiatric Hospital, the Vanderbilt Clinic, the Presbyterian Hospital and others. Similar coöperative enterprises are establishing themselves in many American cities. (Underwood & Underwood.)

2. *Social Insurance*

Along with the developments which have looked toward the guarding of the health of the community, has gone a movement for insurance against illness, accident, and old age. Laws in pursuit of these objects are obviously based upon the notion that industry, being responsible for workmen in its service, ought to bear, as part of its cost of production, some of the expense involved in reconstructing an injured workman and of contributing to the support of his family; and that society, also, might well assist the individual to guard against the hazards of this and other phases of the working life.

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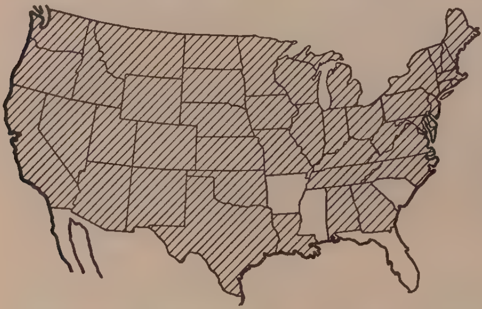
[7] Leo Wolman, "Consumption and the Standard of Living," in *Recent Economic Changes*, pp. 19–22.

Workmen's Compensation laws (insurance against accidents), providing medical care and money benefits, now exist in all states except Arkansas, Florida, Mississippi, North Carolina, South Carolina, and the District of Columbia. Two Federal laws also cover employees of the government and longshoremen working on ships in harbor. A few include, along with accidents, occupational diseases (California, Connecticut, Massachusetts, North Dakota, Wisconsin, Hawaii, and the Federal statutes). A few others include only a limited few diseases such as lead poisoning, the "bends" (peculiar to workers under compressed air) and anthrax.

The usual provisions of these laws are summarized in *The American Labor Yearbook:*[8]

> All compensation laws require the employer to furnish medical services and supplies. In 16 states, in Hawaii and Porto Rico, and under the two federal laws, medical services are to be furnished as long as they are needed, subject to the approval of the compensation board. Other states limit either the period or the amount of the services, but permit the worker to appeal to the board to have them extended.
>
> All the laws except those in Oregon and South Dakota provide for a waiting period, after the accident, during which no compensation is paid. In five states and in the two federal acts the waiting period is less than a week; in 29 states it is seven days; in three states it is 10 and in four it is 14 days.



All states except the white ones here have adopted some form of compensation for injury to workmen. Investigate the reason for the white spots.

> Two-thirds of all industrial accidents terminate within seven days. Three-quarters of these last at most three days.
>
> Fourteen states and the two federal acts allow the worker 66–$^2/_3$ per cent of his wages while he is laid up. Seven states allow 65 per cent, six and Hawaii allow 60 per cent, three allow 55 per cent, and the rest allow 50 per cent. Arizona, Oregon, and Washington set no maximum or minimum, but the rest of the states have lower limits ranging from $3 to $8 a week, and upper limits ranging from $12 to $25. Thirty-four states have a maximum number of weeks during which temporary compensation may be paid, or a maximum number of dollars that may be paid, or both. The time limits range between 200 and 500 weeks, with 1,000 in Wisconsin. The money limits range from $1,500 to $8,500.
>
> If the total disablement incapacitates the worker permanently, he continues to receive a fractional wage every week in 15 states and under the federal employees'

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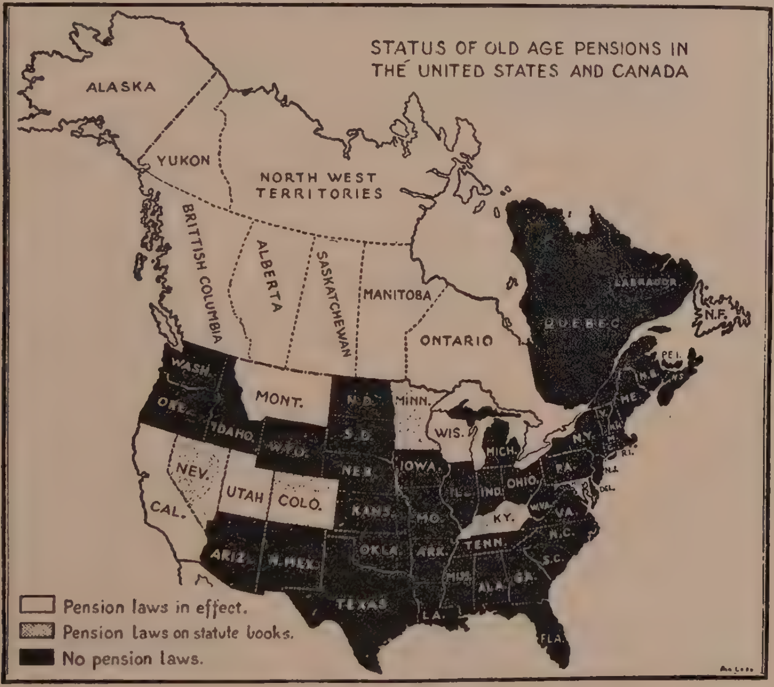
[8] Published each year by the Labor Research Department of the Rand School of Social Science, of which Solon DeLeon is director. The quotations are from the *Yearbook* for 1928, 222 ff.

law. In the other states the limits range between 260 and 550 weeks (1,000 in Wisconsin) and from $3,000 to $19,500. A few states give special consideration to young workers, who have a greater life expectancy and are still earning low wages, when they are injured.

If the worker is permanently injured, but can go on working after a while with some handicap, he usually receives an amount paid in terms of total-disability compensation, such as 15 weeks' compensation for the loss of a little finger, or 125 weeks' for an eye. A few states try to repay him in proportion to his loss of earning power. This is much more difficult to decide on. If a worker loses a second eye (for instance) it is a greater loss than losing the first, but employers protest that they should not have to pay more for an eye because it happens to be the worker's only one. So in 10 states and under the federal longshoremen's act payment for the extra disability is made out of a special fund. Massachusetts and North Dakota have taken steps in this direction.



Why Old Age Security

"Do you know that two out of every five persons reaching age of sixty-five find themselves dependent? Do you know of anything more pitiful and heartrending than old age when it is surrounded by poverty, indifference and loneliness? In this country today, about 2,000,000 old folks are facing such a fate." (Courtesy of American Association for Old Age Security.)

If the injury causes death, the funeral expenses must be paid in addition to compensation for dependents, except in nine states and two territories. In seven states and under the two federal laws the maximum for funeral expenses is $200. In 21 states and Alaska it is $150.

The widow receives 35 per cent of the weekly wages until her death or re-marriage. For each child under 18 there is an allowance of 15 per cent more. Total compensation may not exceed 66–$^2/_3$ per cent. Alabama, Hawaii, New Mexico, and South Dakota exclude non-resident dependents from compensation, and other states discriminate against them. If there are no dependents most states provide only for funeral compensation, but a few make the employer or his insurer pay part of the death benefit into special funds for rehabilitating industrial cripples and for second-injury cases which result in permanent total disability.

Massachusetts in 1918 provided for rehabilitation of industrial cripples through surgery, general re-education, technical re-training, and help in finding a new job. In 1919 nine states followed. In 1920 Congress voted to give the states a dollar more for each dollar they appropriated for rehabilitation, and now 41 states have undertaken the work.

The same *Yearbook* summarizes the situation as to old-age pensions:

Pensions for poor old people are provided by statutory insurance in 26 foreign countries. In 15 of these, the pensions are financed by contributions made by the worker, the employer, and the government, and in one they are voluntary. Germany was the first country to adopt this type of plan for workers in general, in 1899; in 1913 it added white collar workers.

Eleven foreign countries use the other method: the government pays out the pension to old people who have no other means of support, instead of sending them to an almshouse or a poor farm. It has been found that the old people prefer to be pensioned and also that it is cheaper than keeping up an institution. This non-contributory system has usually been used by the English-speaking countries. Though Great Britain changed to the insurance plan in 1925, Canada in 1927 changed from voluntary insurance to straight pensions, optional with each province.

At the opening of the 20th century there was legal old age protection in countries with about 100,000,000 population. Now it covers a population over six times as large, a third of all human beings. The chief countries still without it are China, India, and for the most part the United States.

In the United States one of the earliest attempts to secure old age pensions was a bill for federal pensions, introduced by the Socialist Congressman Berger, in 1911. Federal bills have often been introduced since then. In 1920 Congress passed a retirement act establishing a contributory system for federal employees.

Among the states, Massachusetts first took notice of the problem by an investigation in 1907. It authorized savings bank life insurance in 1908, but the system has been utilized by few. Fifteen states have held one or more inquiries since then, and bills have been introduced into almost every legislature. The first results came in Arizona and Alaska. Arizona passed a pension law by initiative and referendum, but the courts held it void because of a series of minor flaws. Alaska offered persons eligible for its pioneers' homes the alternative of a pension. The trustees of one of the homes decides how much the pension shall be.

In recent years the subject has been actively considered by many legislatures. A conference under the auspices of the American Association for Labor Legisla-

Green Pastures for Old Horses—Poorhouse for Old Drivers

"Frankie," New York Newspapers' Bucephalus, is "pensioned" off after 10 years' work—Driver, putting in 47 years of toil, is rewarded with dismissal.

On January 10, 1930, the New York Sun reported the retirement of "Frankie," one of its wagon horses, to the farm of the Horses' Aid Society in Westchester, where the animal is to spend his last years in comfort and rest. On the same day the Association received a letter from the wife of a driver, who after 47 years of consecutive toil for one firm, found himself dismissed and penniless, facing privation at sixty-six. The two stories, printed below, speak for themselves:

"FRANKIE" THE HORSE

"Far out along the Sawmill River Road which winds through the thick woods of Westchester county and across swift bubbling streams there is a place of green pastures and still waters. Here there are cool, clean stables and an everlasting abundance of hay.

"No fence surrounds these meadows nor does one hear the smart crack of whip on flesh or feel its sting. Gone is the blue choking vapor, the shrieks of the klaxons, the thunder of the Elevated and the ugly barks of abusive delivery boys. In its place is tranquility and it is famous from one horizon to the other as the equine paradise, the Horse's Heavenly Rest. It is the farm belonging to the Horses Aid Society, to which those good animals who have given years of faithful service go to spend their declining years.

"After carrying the news from Chamber Street to Chelsea for ten years, Frankie, the old dray horse which has been pulling the Sun's delivery wagons, will be taken tomorrow to this rest farm in Millwood, N. Y. There he will associate with fourteen other horses whose records of faithfulness and drudgery are equally long and distinguished.

"There together with his friends, the milkman's horse, the policeman's horse, and the junkman's horse, he will whinney over old memories and neigh about his vivid experiences along the city's streets.

"He has more than three hundred friends in the Chelsea district His Chelsea friends got together one day and told Mrs. Stella Ehrlich, president of the Horse's Aid Society, about Frankie. They said he had deep rings beneath his eyes although he was always well fed and groomed. Mrs. Ehrlich called up The Sun. She learned that Frankie was among the older employees. She learned that he came to the paper as no colt. Not by a long shot. He had had six years of previous experience on the old Herald. He knew his copy, and it is said he could tell by the feel the difference between the Wall Street and the Night editions.

"Thus it was arranged that he should be retired and that he should take things easy and spend the rest of his life among green things growing."

—*The New York Sun, January* 10, 1930.

HENRY, THE DRIVER

Dear Sir:

"May I come to you for information regarding pensions for employees of forty-seven years' continuous service with one firm?

"These are the circumstances; forty-seven years ago, Henry Williams went to work for the .... Co. at . . . Street, New York City.

"During that time he has only had one minor accident, as far as the property of the Company was concerned, but he himself was carried to the Broad Street Hospital where they bandaged his ribs with surgeon's plaster, his head, arms, and legs were bandaged where he had been thrown under his horse when the collision occurred. The . . Company, sent another man to get the horse and wagon and stopped Mr. Williams' salary immediately.

"I, his wife, being a trained nurse, took him home, sent for the doctor and cared for him. At the end of three weeks Mr. Williams with the help of a cane went back to work; it cost us $200.00 without counting my services and the Company never offered us one cent.

"A year ago Mr. Williams, being sixty-five years old and having served the company forty-six consecutive years, told them the traffic conditions were too much for him and asked for something else to do, or to retire him on a small pension, they refused or rather ignored his request and he fought it through for another year.

"In December, 1929, he gave ten days notice that the traffic conditions were too confusing for him, and asked again to be relieved. They simply told him, "They never had given a pension," and let him go without even a cigar in recognition for forty-seven years of continuous service.

"Can nothing be done regarding this matter?"

(*Signed*) MRS. WILLIAMS.

Senator Wagner Urges Old Age Pensions

In an address to the National Democratic Forum in New York on January 17 United States Senator Robert E. Wagner declared that old age pensions must become an accepted policy of state governments in order to alleviate the troubles caused by the discarding of middle-aged workmen and their replacement by machines. "The state," declared Senator Wagner, "must definitely undertake that those who have spent a lifetime in labor shall not spend their declining years in want. Old age pension legislation should become an accepted principle of state government."

(Courtesy of American Association for Old Age Security.)

tion in 1922 drafted a standard law. More recently the American Association for Old Age Security has been formed.

Since 1922, 10 state legislatures have passed pension laws. In California, Washington, and Wyoming the governor vetoed the bills, though in Wyoming he endorsed the principle. In Pennsylvania the law of 1923 was held unconstitutional in 1925. The state supreme court pointed out the clause in the state constitution which forbade appropriations for benevolent purposes. The state had always had a poor law, but that, the court held, did not justify the new statute, which covered many more persons—all who had less than $3,000 or an income of less than $365 a year. The legislature took the first step toward a constitutional amendment and authorized a further inquiry. But the amendment was defeated on the second vote in the legislature of 1927, and the issue cannot come before the people as a constitutional amendment until 1933. In many other states there was favorable action in 1927, so that a number of new laws are expected soon. Meanwhile, in those states which have laws, it is necessary to get the several county boards to adopt the pension plan which the law authorizes.

Dinner time at a Missouri poorhouse. Such miserly institutional treatment of the indigent aged furnishes one argument for nation-wide old-age pensions. (Courtesy American Association for Labor Legislation.)

Montana's old age pension law of 1923 left the financing and administration of the plan to the county boards. Most of them had accepted the plan by 1927, when Butte, the largest city, took it up on grounds of economy. The county commissioners may award any suitable pension up to $25 a month. In the first year the average pension was about half the maximum. The next year showed that the average cost of pensioning was about 27 cents for each person in the population. It cost Montana five times as much to keep an old person in an institution as to pension him. The third year showed that, out of every 1,000 population, about 2.5 had applied for pensions, 2.2 had been granted pensions, and 1.4 were receiving pensions.

Nevada acted in 1923, but passed a new law in 1925, like the Montana law. The yearly meeting of county commissioners decided not to accept the statute, and it is inoperative.

Wisconsin in 1911 provided for state life insurance, but little use was made of the plan. In 1925 it passed a pension law. This authorized each county to pay pensions, and to abandon the plan after a year if it wished. The county judge decides what amount is proper and his decision is final. He may not grant more than enough to make the pensioner's total income $1 a day. The state pays a third of each pension. In the first year six counties accepted and one revoked its acceptance. Of the 261 pensioners, 62 per cent were males; 79 per cent were disabled; 18 per cent were occupied, though most of them were not able to continue their original trade; 7 per cent had earnings, which averaged $6.34 a week; 48 per cent had some source of income beside their pension; 40 per cent owned their homes. They had an average of 2.85 children, most of them married. The married children had an average of 2.8 children to support, and were usually laborers, farmers, or factory hands.

In 1926 Kentucky passed a law like Wisconsin's, but the maximum pension which a judge may fix is $250 a year. Beggars are excluded, and persons able to earn $400 or having an income of $400 or owning $2,500. The state does not help the county to pay.

In 1927 Colorado and Maryland passed similar laws, which excluded persons with more than $3,000 or with some one legally responsible for supporting them.

Foreign laws fix the pensionable age at 60 or 65, but American state laws put it at 70, except that it is 65 in Maryland and in the inoperative Nevada law. A pensioner must have lived in his state 15 years. The mobility of American labor explains in part why America prefers non-contributory pensions instead of insurance-pensions, which operate through the employer.

This about concludes any description which can be made of social insurance in the United States. The striking feature of the contemporary situation is the prevalence of this type of protection for the individual in nearly all other western countries and the extreme reluctance with which our own legislatures have met the problem. It is also true, if one can judge from the prevalent atmosphere, without much documentation, that we are further from willingness to lift these burdens from the individual than ever before. In the general shaking up of opinions which accompanied the war, it seemed that something might be done; but nothing was. Even the workers, upon whom the weight falls most seriously, seem to prefer high wages to security and protection. This may be an opinion which is more seeming than real, for private insurance companies have been tireless and persistent in their efforts to block all plans which involved governmental insurance whether it applied to their own fields or not. The medical profession has also opposed the movement in apparent fear that some of the prerogatives of the privately practicing physician might be limited. The insurance companies and the physicians might suffer an economic injury which would still be an immense benefit to society, a possibility which is frequently overlooked.

The provisions of the standard bill for health insurance prepared by the American Association for Labor Legislation would have made protection compulsory for all whose earnings were less than $100 a month. In case of sickness, accident or death (not otherwise met by workmen's compensation) the insured would receive medical, surgical and nursing attendance (or hospitalization) up to 26 weeks a year. A cash benefit equal to 66⅔ per cent of wages would be given from the fourth day to the end of the illness, with a 26-week limit. Insured women, and wives of insured men, would receive all necessary care in maternity cases; in addition, insured women would receive regular cash benefits for eight weeks; six of which must be after confinement. A funeral benefit up to $50 was included.[9]

Funds to pay for these benefits were to be provided by contributions from the workers themselves, their employers, and the state. Ordinarily the state would contribute one-fifth and the worker and his employer each one-half the remainder. If wages were very low the worker's share would be less. It was estimated that the cost to a worker earning $600 a year would be about $24. This sort of thing is prevalent in Europe. Germany began to use such a scheme as early as 1883; and Russia has now gone so far as to provide care as well as full wages during incapacitation.[10] There is, therefore, nothing new or untried about the system. So far, in spite of all this experience, we have preferred to leave the insurance against these risks to individuals themselves. There is room for argument here, a dispute which enlarges into contrasting conceptions of the rôle of the individual in social life and of the mutual duties of groups and their members. It is better, it is sometimes said, to divide among the workers as wages all the social income to which they can establish title, rather than to segregate part of it as insurance. If much income is received as insurance benefits, less must go to wages and so the choice of the individual is limited and his rights are abridged. Against this the advocates of social insurance are apt to urge that experience has revealed a certain general carelessness about

Even the stoutest believers in individualism today are willing to concede the necessity for the exercise of fairly wide police powers. These various government inspectors perform functions vitally necessary to a system such as ours is, functions which individual enterprises, in their preoccupation with immediate profits, are likely to overlook.

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[9] *Ibid.*, 227.

[10] An excellent brief account of social insurance in Soviet Russia, the latest-devised, and in many ways the most complete and satisfactory national scheme in operation, is to

the future which shows that workers usually need protection against their own faulty ability to foresee future exigencies; and that this is more serious if we regard it as a family matter, with helpless dependents involved in the contingencies of suspended income. Also some argument is possible as to the incidence of the income apportionment involved. It is possible that the entire burden of insurance does not fall on wages, and that its benefits may represent some addition to the gross income of the class which obviously needs it most. These are matters which we cannot pursue further here. The interested student will find that, if he desires to inform himself more thoroughly, there has, by now, grown up a voluminous literature which he can search for fact and opinion.[11]

Hiking party in Mount Rainier National Park—ideal recreation for an indoor nation. (Courtesy National Park Service.)

Aside from these means of guarding the health of the community there has been a considerable movement toward the establishment of negative standards by state boards of health everywhere. This is done under the police powers which permit them to make whatever provision is necessary for regulation of industry in the interest of the public welfare. Industrial establishments are inspected, safety devices stipulated, municipal milk

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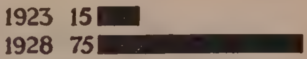
be found in "Social Insurance in Soviet Russia," by A. Abramson, in the *Journal of Political Economy*, xxxvii, 377 ff. (August, 1929).

[11] See, for instance, *Labor Legislation*, by Commons and Andrews; *Social Insurance*, by I. M. Rubinow; *Social Insurance*, by R. M. Woodbury; *Workmen's Compensation*, by E. H. Downey; *Workmen's Compensation and Insurance*, by D. H. Van Doran; *Facing Old Age*, by Abraham Epstein; *Unemployment Insurance*, by A. B. Forsberg. There are many other references which can be discovered in any library, and a monthly review is published by the American Association for Labor Legislation. No mention has been made here of insurance against unemployment. This is, however, discussed elsewhere in this book.

supplies are carefully examined, public eating places are regulated, and many like measures are taken to strengthen the work of public departments of health.

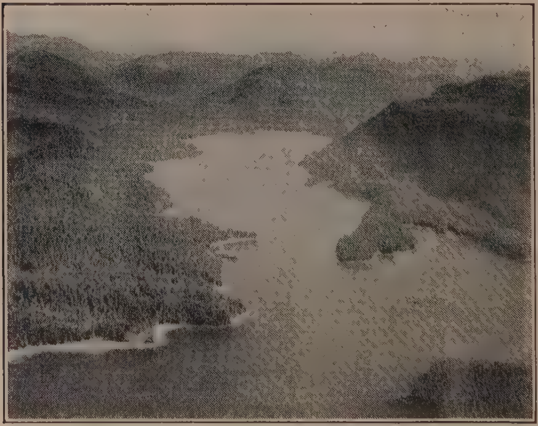
3. *Recreation*

The cutting down of the hours of work in the United States has left a greater and greater part of each day and of each week available for recreational purposes. Also, so far as children are concerned, the decrease of child labor has made it possible for more children to participate in the activities which contribute to their health and growth. The modern forms of organized recreation are of two kinds. In the first place, there is a great development of outdoor recreation and in the second place an equally great development of such indoor activities as talking pictures, concerts, theatrical presentations, and dancing. Obviously, of these, the more desirable sort are those which take a population, which does its work indoors, into the open for the exercising of mind and body in reconstructive activities.



One of the most characteristic American uses of leisure is "turning on the radio." In 1923 there were in use fifteen million sets which had grown to seventy-five million by 1928.

The organized development of outdoor recreation has perhaps gone further than most people realize. It has, of course, been greatly stimulated by the development and the cheapening of automotive transportation. Municipal and state authorities and even the Federal government have established free public parks where people may go for play, or even, in the case of national and state parks, may camp for the entire summer season if they like. There are now nineteen of these national parks, comprising upwards of eleven thousand square miles in area, which are used to a greater and greater extent each year.



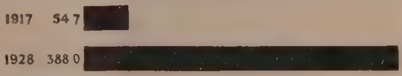
Vast forested areas are still owned by the government. They possess valuable timbers which will assist in maintaining the supply of newsprint. Meantime, they are available for recreational purposes. This is a picture taken along the indented coasts of Southeastern Alaska, far from the centers of population, but drawing more and more lovers of wild life each year. (Courtesy U. S. Department of Agriculture.)

For the year 1929 admissions to all national parks ran to nearly two and a half millions. This

THE NATIONAL PARKS[12]

National Parks in Order of Creation	Location	Area in Sq. Mi.	Distinctive Characteristics
Hot Springs, 1832	Middle Arkansas	1¼	46 hot springs possessing curative properties.
Yellowstone, 1872	Northwestern Wyoming	3,348	Geysers; boiling springs; mud volcanoes; petrified forests; Grand Canyon of the Yellowstone.
Sequoia, 1890	Middle eastern California	252	12,000 sequoia trees over 10 ft. in diameter, some 25 to 36 ft. in diameter; cave.
Yosemite, 1890	Middle eastern California	1,125	Valley of world-famed beauty; lofty cliffs; many waterfalls of extraordinary height; 3 groves of big trees.
General Grant, 1890	Middle eastern California	4	Created to preserve Gen. Grant tree, 35 ft. in diameter
Mount Rainier, 1899	West central Washington	324	28 glaciers; 48 sq. mi. of glacier, 50 to 500 ft. thick.
Crater Lake, 1902	Southwestern Oregon	249	Lake of extraordinary blue in crater of extinct volcano; sides 1,000 ft. high; lava; fishing.
Wind Cave, 1903	South Dakota	17	Miles of galleries and chambers containing peculiar formation.
Platt, 1904	Southern Oklahoma	1⅛	Many sulphur and other springs possessing medicinal value.
Sullys Hill, 1904	North Dakota	1⅛	An important wild-animal preserve.
Mesa Verde, 1906	Southwestern Colorado	77	Most notable, best preserved prehistoric cliff dwellings.
Glacier, 1910	Northwestern Montana	1,534	250 glacier-fed lakes; 60 small glaciers; precipices thousands of feet deep.
Rocky Mountain	North middle Colorado	397½	Heart of Rockies; snowy range, peaks 11,000 to 14,255 ft. altitude.
Hawaii, 1916	Hawaii	186	Kilauea and Mauna Loa on Hawaii, Haleakala on Maui.
Lassen Volcano, 1916	Northern California	124	Only active volcano in U. S. proper; hot springs; mud geysers.
Mount McKinley, 1917	South central Alaska	2,645	Highest mountain in North America.
Grand Canyon, 1919	North central Arizona	958	Greatest example of erosion in the world.
Lafayette, 1919	Maine Coast	8	Group of granite mounts on Mt. Desert Island.
Zion, 1919	Southwestern Utah	120	Zion Canyon 800 to 2,000 ft. deep.
Bryce Canyon, 1928	Southwestern Utah	22	Eroded pinnacles, vivid colorings.
Grand Teton, 1929	Northwestern Wyoming	150	Spectacular Teton Mountains.

gives some idea of the extent to which people are taking advantage of the opportunity for this form of recreation. States as well as the Federal government are establishing parks of the same sort which are particularly available, of course, for motorists and have the advantage of being closer to the great centers of population in the East, which, perhaps, need contact with the out-of-doors more than Western people do.



Thousands of cars visiting our National Parks: the growth since 1917. (Data from Nat'l. Auto. Chamber of Commerce.)

The Allegheny State Park on the Northern border of the state of Pennsylvania and the southern border of the state of New York, in the hills and forests on the Western side of the Alleghenies, is a good representative of this type of public camping center. One disadvantage of the national parks has always been that they were so far away from the centers of population. Congress is taking steps to remedy this situation by establishing new national parks in the East as well as in the West. Already there is a definite movement under foot to perfect such a park in the Blue Ridge Mountains and one in the Great Smokies of Tennessee. In this day of the universality of the motor car these centers of outdoor life are becoming of the greatest importance to the whole population.

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[12] *The World Almanac*, 1929, p. 358.

For the most part, however, national and state reservations can only be visited during the summer months and for very short periods of time by most workers. For them, therefore, the most important development is that of parks which lie very close to their homes. Here municipal playgrounds are an important feature of life. During the year 1921, for instance, nearly $9,000,000 was spent by 458 cities for the maintenance alone of playgrounds and recreation centers. In addition to this more than $5,000,000 was voted for bond issues for recreational purposes. A daily attendance of considerably more than 1,000,000 children is reported by 407 of these cities. These playgrounds, of course, are of the greatest importance to children; but cities are not overlooking the possibility of development for adults of such outdoor activities close to home as golf and tennis. For instance, in Chicago, during 1922 more than 1,000,000 tickets were issued for golf alone and it was reported by the starters in the park that several times that many would have been issued had there been room to play. Special play activities were reported by the same 502 cities as follows:

Dinner on the trail. In such expeditions boys and girls reconstruct the conditions of early American life and taste, if only momentarily, the zest of pioneer experience. (Photo Hine.)

	Number of Cities
Boy Scouts	234
Camp Fire Girls	139
Girl Scouts	138
First aid	126
Folk dancing	296
Industrial athletics	139
Skating	146
Summer camps	106
Swimming	230
Tramping	217

Of this last list one or two items deserve special mention. For instance, the Boy Scouts. This organization teaches boys the fundamentals of physical normality and has developed a program of activities which keeps them much in the open air. It has grown very rapidly, the membership at the present time reaching very nearly one million. Almost equally important has been the development of the Girl Scout movement, which has a similar reason for existence. Other organizations have also developed programs of recreation. The Y.M.C.A. is one of these. It maintains gymnasiums, swimming pools, athletic fields, and summer camps. By 1924 it had nearly 400,000 individuals enrolled in its gymnasium classes and employed upwards of 900 physical directors. The Knights of Columbus and the Y.M.H.A. have done similar work with other groups.

It will be seen from this that an industrial system which has driven its workers indoors for the most part is also beginning to provide the means for maintaining physical and mental fitness. There are also many industrial firms which themselves provide some form of outdoor recreation for their employees. Many of them have found that it pays in many ways to devote considerable attention to the development of athletic fields and other recreational centers. A good many urban industries will be found, for instance, which maintain country clubs for their employees or some other means of inducing them to participate in outdoor life.

The modern school aims to develop creative abilities simply by providing the materials for its expression and by organizing its group activities. This school happens to be a coöperative one maintained by a trade union group. (Courtesy Amalgamated Clothing Workers Union.)

It was this same impulse that led to the organization of the Playground and Recreation Association of America which was initiated in Washington in 1906. It has been largely instrumental in popularizing play and bringing about the establishment of municipal playgrounds and other facilities for public recreation. Its activities are rapidly expanding. There seems to be a great power in the movement for taking an indoor population into the open for reconstruction. All forms of sports and activities which have this for their general purpose, show a rapid development and signs of even more strength to come.

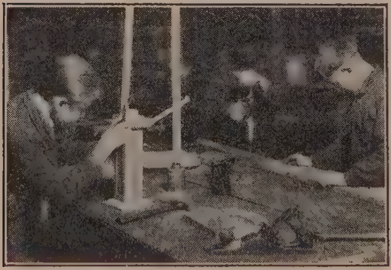
4. *Education*

It will not be possible or necessary for us here to discuss education at any length; we need simply to say that education has a special function in an industrial society which it could not have in any other society which has gone before. Its purpose is not purely that of the development of culture or of the genteel attitude toward life. What modern education intends to do is to better adapt children to the realities of modern urban-factory life, not forgetting, however, that education ought to build toward a better future as well as adapt to the present.

TOTAL EXPENDITURES FOR FREE SOCIAL SERVICES BY 48 STATES AND CITIES WITH A POPULATION OF OVER 30,000.[13]

Service	Expenditure	
	1915	1926
Education	$708,164,000	$2,499,000,000
Libraries	15,467,000	35,874,000
Recreation	21,295,000	53,969,000
Conservation of health	21,950,000	56,357,000
Hospitals	58,005,000	144,819,000
Charities	34,347,000	58,211,000
Mothers' pensions	108,000	12,705,000
Total	$859,336,000	$2,860,935,000

One who examined the school system as it exists today might be somewhat discouraged concerning this latter ideal and might feel that education was too largely devoted to training in the technique of industry as it exists at the present time. A good many people are somewhat worried about the disappearance of what were called the old "cultural" studies from the curricula of high school and college. But this seems now, when the disappearance is almost complete, to have been an inevitable development. An education which is not relevant to the life to be led lacks the elements of vitality necessary to its continued existence. People will not, in the long run, tolerate training which fits for a life which they never find.



Learning to use their heads by learning to use their hands. Vocational education at its best is always directed to such an end. (Photo Hine.)

The modern development of vocational education in elementary school, high school, and college has received its impetus from the need for adaptation to the realities of urban existence; and while it may on occasion have lost sight of this purpose and devoted itself too intensively to training for a particular small task in the industrial system, still, educators have, for the most part, kept their minds on the fundamental idea that progress must come through changes in existing technique, and that, until the existing technique has been mastered, improvement cannot be made. The trend of modern education, therefore, is to lead children up through the understanding of the institutions and instruments of industrial civilization until they reach the point where they themselves are sufficiently informed and trained to begin to make their own contribution to common civilization.

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[13] From *Recent Economic Changes in the United States*, p. 19.

Industry has, in a sense, had a remarkable effect on education as a whole. As a matter of fact, education has been made possible by the surplus of wealth built up by the industrial system. Not until there were savings—until more wealth was produced than was used—could there be expenditures for such institutions as our modern schools have grown to be. But also, as we have seen in our discussion of rural education there could not be the pressing need there is today for formal schooling until society had become so complicated as to obviate the possibility of a home apprenticeship which would be an adequate training for life.

The very growth in number of the children provided for in the modern school system has been most astonishing to the uninformed observer. The accompanying table will give some idea of how rapid the growth has really been:

PUBLIC SCHOOLS IN THE UNITED STATES

School Year	Population 5 to 18 Years	Pupils, Number Enrolled	Teachers	Expenditures
1871	12,305,600	7,561,582	220,225	$69,107,612
1880	15,065,767	9,867,505	286,593	78,094,687
1890	18,543,201	12,722,581	363,922	140,506,715
1900	21,404,322	15,503,110	423,062	214,964,618
1901	21,982,797	15,688,602	431,783	227,465,664
1902	22,278,693	15,917,385	441,819	238,262,299
1903	22,655,001	15,999,717	449,864	252,804,081
1904	23,028,748	16,256,038	455,242	273,216,227
1905	23,410,800	16,468,300	460,269	291,616,660
1906	23,792,723	16,641,970	466,063	307,765,659
1907	24,262,936	16,890,818	481,316	336,898,333
1908	24,613,763	17,061,962	495,463	371,344,410
1909	24,239,820	17,506,175	506,453	401,397,747
1910	24,360,888	17,813,852	523,210	426,250,434
1911	24,745,562	18,035,118	533,606	446,726,929
1912	25,167,445	18,182,937	547,289	482,886,793
1913	25,587,331	18,609,040	565,483	521,546,375
1914	26,002,153	19,153,786	580,058	555,077,146
1915	26,425,100	19,693,007	604,001	605,460,785
1916	26,846,976	20,351,687	622,371	640,717,053
1918	27,686,476	20,853,516	650,709	763,678,089
1920	27,728,788	21,732,340	679,274	1,045,053,545
1922	28,627,201	23,239,227	722,976	1,580,671,296
1924	29,345,911	24,288,808	761,308	1,820,744,000
1925	29,705,264	24,650,291	777,945	1,946,097,000
1926	30,064,621	24,741,468	814,169	2,026,308,000

It can hardly be necessary, however, to issue a word of warning concerning these figures having to do with the growth of schools; for rapid as that growth has been, it has not been sufficient, and has never kept up with the demands that we make upon the educational system. One measure of the inadequacy of the educational system can be got for instance, by considering the number of part-time pupils in such a city as New York. In this as in other fields of the improvement of modern life we make progress; but that progress is not so great that there is not still need for greater effort and greater expenditure of treasure upon the really valuable institutions of our system.

5. *Revised Intellectual and Æsthetic Standards*

In any society the matters of most immediate concern are bound to be those we have been discussing. Work, its kinds, and the length of time it requires, health, education, and recreation, are some of these. Nor are we avoiding the problem of better apportionment of income or the consuming of it; these are, however, deferred until subsequent chapters. All of them have to do with the fundamentals of existence. Consciousness of beauty and striving after it are later considerations. Yet they need to be worked into the very fabric of existence too.

In older cultures than that of industrialism, standards of the beautiful informed all the instruments of life. Even the humblest furniture of Colonial America had a beauty as distinctive in its way as that of more masterly craftsmen of the time in England. And the present generation of Americans is constantly reminded of the beauties of the houses and public buildings of its ancestors. But we misconceive the nature of beauty in life, often, as, for example, when we copy those old colonial houses and their furnishings, suitable once, and, indeed, exquisitely fitted to their purpose, but for our day hopelessly unfitted. That we make such attempts is a confession of our own inability to create fresh beauties with our new materials. When we try to make a suburban home look like a seventeenth-century farmhouse or a skyscraper to take on the form of a medieval cathedral—as we often do—we confess ourselves without standards of our own.

In a good American tradition are all these furnishings from an old house at Woodbury, L. I.; the design differs from that of the furniture in the Massachusetts house; but they are alike in simplicity, good workmanship and consistency of taste. Behind such a room there is the feeling of an unassuming but exceedingly solid culture. (Courtesy of the Metropolitan Museum of Art.)

Industrial culture has developed so rapidly and the materials we use have shifted so rapidly in our hands, that they have outrun our ideas, which have lingered in the past. So it is that we can often think of nothing to do with wood but make Duncan Phyfe chairs and nothing to do with steel and concrete but build Greek temples, or Gothic churches. But as industrialism ages, we create new standards of beauty. There evolves the architecture of mass, the polyphonic music, the impressionistic painting, and the new poetic forms which are of the essence of the modern culture.

What is most distinctive in modern urban architecture can be seen in the New York Telephone Building. Note the use of cubes and planes and the sacrifice of decoration to the mass conception. (Photo by Sigurd Fischer. Courtesy Voorhies, Gmelin and Walker.)

As we go on we begin to see that it is not enough to develop a material culture, to eliminate poverty, to make efficient factories. Life must not only be made more comfortable for the body, the world must also be made a place in which the spirit can find itself at home. A part of the educational system must devote itself to this purpose. We must have schools of architecture, of music, of painting, and of poetry. And they are being provided for. Not many years ago there were no such things. Now there are many schools of architecture, for instance, in America; and one could not hope to enumerate the examples or to measure the extent of current educational work in the other arts. Libraries and museums have developed in every community. And America supports more than fifty symphony orchestras and 425 choral societies and concert organizations.

But the improvement of this sort is not confined to the arts. There are all the other channels of intellectual advance also, especially in the sciences. In a sense science is to be thought of as an agent of progress, useful for that purpose. But, in another sense, it is to be thought of as a field of human activity which in itself measures progress. It is not only a method but also an art whose devotees need no other reward for its pursuit than is involved in the activity itself. This is just as true of the "social" sciences as it is of the older "natural" sciences. Our industrial society is gradually learning to sustain and encourage these pursuits, not as adjuncts of the economic system, but as ends of life, in all respects the highest of which man is capable. It is beginning also to grasp the notion that ability in these activities is the rarest and most precious possession of the race to be jealously fostered and made aware of itself.

This cannot be called "humble furniture." These pieces dating from about 1750 are from houses of note even at that time; but they serve to illustrate standards of taste and craftsmanship which were more general and uniform then than now. The "highboy" on the left is burl walnut, the other on the right, and the clock, are "japanned." (Courtesy of Metropolitan Museum of Art.)

We have progressed now through a discussion of the productive system as an agency for raising the standards of living. We have considered both rural and urban production. We have looked rather intensively at the aims to be realized by production and how successful this realization has become: (1) the efficiency ideal of more goods per unit of effort expended and (2) the other ideal of making work in itself satisfying and beneficial. We shall now go on to a discussion of some other ways of raising standards, notably (1) by the better apportionment of the goods produced, (2) by the better uses of them, and (3) the possibilities of betterment there are in the several comprehensive schemes for economic reform prominently under discussion at present.

PART III

RAISING THE LEVELS OF LIVING THROUGH THE JUST APPORTIONMENT OF INCOME

CHAPTER 26

THE PROBLEM OF THE JUST APPORTIONMENT OF INCOME

1. *The Development of Present Attitudes concerning Apportionment*

Few people are so constituted as to approve thoroughly the present modes of the apportionment of society's income. No doubt many are satisfied with their own shares and would not wish any change for themselves, but this is quite a different thing from believing in general that the present situation is morally ideal. One does not have to look far to see the wicked flourishing, at least in worldly goods, and enjoying advantages they have not earned either by any service to society or by achieving a type of life beautiful to contemplate. Still more in evidence are the poor who seem to suffer through no faults of their own; for often they are apparently people of talent, potentially able to do great things if they were possessed of the economic means for developing what is in them. One must be complacent indeed to feel that his own good fortune is a reason for defending such a state of affairs. And, in truth, there are not many who are willing to defend it, though there are many who are not willing either to do anything actively about it.

Robin Hood—who represented one way of effecting a reapportionment of income, simple, but somewhat drastic.

Reformers at all times, impressed by the obvious unfairness of the apportionment of income, have longed to change it. Perhaps the simplest active remedy ever employed was that of Robin Hood, who blithely advanced with his hardy followers to relieve the rich of their excess gold and distribute it among his friends, the paupers. But in an age of law and order such methods while romantic are impractical, to say the least, and the problem of reapportionment is decidedly more complex than can be handled by these direct and simple means.

Students of social welfare are by no means agreed that it is well for society to undertake to rearrange the apportionment of economic goods at all. There are and always have been several arguments directed toward proving that society should let well enough alone. One may be inclined, skeptically, to feel that oftentimes these arguments have been in the nature of special pleading to justify selfish interests.[1] But the arguments are too plausible to be dismissed with this simple answer.

In the first place, it has been widely argued ever since the Middle Ages that the present condition of humanity is divinely ordained, and that it is not only unwise but irreligious to attempt to meddle with God's plans. The Church might deplore and pity poverty; it might hand out alms and praise the wealthy noble who distributed an occasional dole to the beggar at the gate; but it could not countenance any attempt at revolutionary alteration of the existing ownership of wealth. The existence of poverty was regarded as simply one aspect of the problem of evil in the world, along with sickness and sin. One might wonder why God had created poverty but should not question his wisdom or ultimate benevolence in doing so. Perhaps his aim had been to chasten the world through suffering or perhaps, even more likely, to reward the superior members of society, because the possession of wealth was in itself a sign that the Creator had considered one worthy to possess it. Anyway, puzzling as the situation might be, the pious attitude was to tolerate it, alleviating suffering a little where convenient, and to trust that eventually justice would be done—if not in this world, then in the next. Thus, the established church, secure in its possession of prosperous lands and abbeys, has usually allied itself with the nobility or the industrial ruling class in defense of the status quo.

In the eighteenth century the social revolutionists attempted to turn this argument of divine right against its authors. God had intended, they said, that every man should have life, liberty, and the pursuit of happiness. Every one, therefore, had a divine or natural right to at least the means of livelihood. This argument inspired them with the moral courage to attempt an overthrow of feudal wealth, in that it allowed the revolutionists to feel that they were not assaulting a divine arrangement of things. But the issue was obviously one not to be settled by theoretical argument since no one could prove, either by scriptural quotation or otherwise, what the divine plan had been.

Associated with these revolutionary doctrines, especially in the minds of such early individualistic economists as Adam Smith,[2] was the belief that it would be more advantageous to allow nature to take its course. Mixed with religious faith, there was arising a spirit of optimism based upon the achievements of human progress, and upon the prospects of natural science. Later, with the acceptance of the theory of evolution, which showed that man had spontaneously progressed upward from the lower animals and through a state of savagery, it seemed more than ever likely that, whatever temporary evils existed, the forces of nature could be relied upon to correct them of their own accord. Darwin, moreover, had argued that this progress had come about through the elimination of the unfit, of the inferior individuals in each generation.[3] Taking this idea over into economic life, one might infer that it would be well to allow poverty and starvation to destroy the weaker members in each age, heartless as it seems. Thus a new generation of supermen might be expected to arise.

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[1] Cf. A. B. Wolfe, *Conservatism, Radicalism and Scientific Method*, Chapter IV (Macmillan, 1924).

[2] Cf. this first great general book on Economics, *The Wealth of Nations*.

2. *Rights vs. Consequences in Apportionment*

All of these beliefs survive today in some less extreme form. It is generally believed that a man has a *right* to his property, and that a government is in some way trespassing upon that right, inflicting an injury upon him, if it takes that property away. Also, without going to the extreme of advising ruthless elimination of the weak, many people believe that it is best for society to tolerate poverty for the sake of other good conditions to which it is essential. Above all, one must recognize the sanctity of private property not only because of men's rights in it, but as a valuable achievement of humanity as it progressed from primitive communism. The hope of gaining wealth, it was argued, stimulates enterprise and brings out the latent abilities in the strong and intelligent; some unfortunate persons must suffer for the sake of social advance. On the whole more is gained than lost.

Countless individuals, urged by the hope that luck may be with them, drive tunnels and sink shafts in the search for gold. Few succeed.

Humanitarian theorists who have desired to combat these complacent beliefs usually have done so with rather unconvincing arguments. Clergymen still try to prove that the injustice is a violation of God's will and that the poor have in some vague way a right to more than they are getting. The socialist, the anarchist, and the communist likewise are prone to appeal to moral rights to justify their proposed redistribution of wealth. Attempting to prove that all wealth is produced by labor, they insist that labor has a right to all wealth. It is easy, then, for the capitalist to reply that they have overlooked the function of capital and skilled management in producing this wealth. Thus the whole question is once more confused.

In short, the concept of rights gives no clear basis for reasoning about the apportionment of income. It is almost impossible to prove anyone's inalienable right to anything. If we appeal to existing property rights and trace them back to their historical origin, most of them are lost in doubt at the source. They usually are found to have been established in the first place by some altogether indefensible act of violent seizure, if only from an original savage owner; or quite as indefensibly to a royal grant from some king whose right to make such a grant is itself dubious. In any case, the question arises, why should twentieth-century society be bound by such doubtfully established conventions? Why should it attempt to base its actions, of such consequence to living men, upon the questionable rights of an irrelevant past? If, again, we look at the processes of acquiring wealth that are going on at present, trying to find out who is really earning this or that item of social income, and thus who has a right to receive it, we are still involved in a maze of difficulties. It is almost impossible in our complex order to trace the productive origin of a single item of wealth to any one individual or even to any one group. Moreover, as will be shown in a later section, the acquiring of wealth at the present day depends in large part on various sorts of luck, and not only upon ability. And luck as a basis of legal rights is too questionable altogether to form a basis for social rule.

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[3] Charles Darwin, *On the Origin of Species*.

The disposition of some theorists, but more especially men in the street, still to argue in terms of rights is a sign that the lesson of Bentham's Utilitarianism, advanced over a hundred years ago, has not yet been thoroughly learned.[4] In order to get anywhere practically, the reformer and the theorist must look, not to rights, but to consequences; in other words, not to the past but to the future of society. This way of looking at things has, in fact, become very prevalent in certain fields. If people discuss, for example, whether or not the House of Lords should continue to exist, few of them would argue on the basis of feudal rights; they would attempt to show that the House of Lords can in some way carry on a useful and beneficial function in government. In other words, there is no demonstrable reason why twentieth-century society should refrain from doing what seems to be for its interests as a whole or for the interests of the majority. Concerning the question of the apportionment of income, there is no bond restraining society from wiping out supposed individual rights and disposing of its collective wealth for the interests of all. And this fact, as we shall see, is becoming more and more widely recognized by all those who are not confused by the desire to defend their own perquisites under the present system. In our future discussion, then, we shall not ask who deserves or has a right to the greatest incomes, but rather what are the probable results of allowing one man or one group to have so much and another man or group so much.

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[4] The great foundation work of nineteenth-century Social Science was Jeremy Bentham's *Principles of Morals and Legislation*, published in 1789, twenty-three years after the publication of *The Wealth of Nations*.

3. *Industrial Incentives and Apportionment*

Here again it is possible for the defender of the status quo to urge that it is for the best interest of society to provide for the stimulation of enterprise by allowing free competition to take its course. There is much to be said for this argument and it deserves to be taken seriously. It implies a psychological theory of motivation: in other words, a theory of how people are inspired to exert their greatest possible efforts. It implies that hope of the present rate of gain is an inducement necessary to economic prosperity. Now this psychological theory is not beyond question. The criticism has been made of it that, although the hope of gain is admittedly a large factor in securing effort, it is not the only motive. Even if this motive were entirely eliminated some people might continue to work—perhaps not so strenuously, but with some enthusiasm—because of their enjoyment of the work for its own sake. Other motives, such as the desire to win honor and respect in society, and the pleasure of coöperating with others in a collective enterprise, might also be relied upon to secure some effort. Suppose, then, that the motive of gain were not entirely eliminated but merely diminished; that some limits were set to the amount which an individual could amass. Sufficient incentive might still exist to call forth all the necessary effort.

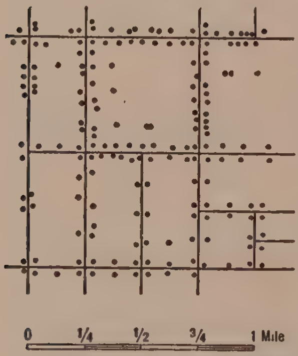
Is it hard to believe that this ancient would rather be at his work than anywhere else in the world? (Photo Hine.)

Granting even that the effort to speed up industrial activity might be a little less keen, would this be an unqualified loss? Certain philosophers, especially those imbued with the quietism of the Orient, often charge us with a frantic and excessive zeal for material advance. If there is anything in such criticisms it might be desirable to deflect some of our social energy into fields other than material production. Most Americans would not admit the criticism to be a valid one. Mostly our western philosophies are philosophies of achievement and activity. But it might be well to ask ourselves occasionally whether our activities are getting the results we require of them or whether we are in some measure imitating the imprisoned squirrel in his revolving cage. Much of the effort induced by the lure of profit does not, perhaps, benefit society adequately in return for the expenditure of energy. It is quite possible to produce an excessive amount of goods. It is quite possible that struggle for wealth may be largely unproductive even of material gain for society, as in the case of competition among middlemen for patronage. The argument that the present system of apportionment is necessary for social welfare and especially for the supplying of incentives to productive effort must therefore be regarded as unproved and probably exaggerated, although containing perhaps a certain element of truth.

A fairly typical view of competitive drilling in the Signal Hill field near Los Angeles. A few wells would have drawn all the oil that hundreds of wells have been provided to reach. Some idea of the waste involved can be had by reflecting on the investment represented by each drilling. (From Spence Ewing Galloway, N. Y.)

4. *Governments Involved in Apportionment*

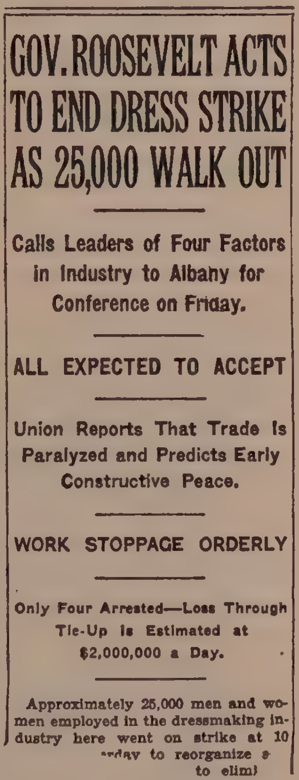
But, even were it desirable for governments to refrain from taking a hand in the apportionment of wealth, it would be impossible. Absolutely free competition as it is ideally conceived is, and always has been, nonexistent. Large groups of individuals, corporations, and trade-unions, are struggling with each other in society's markets for a larger share in the proceeds of industry. But this is not free competition; for admittedly some have distinct advantages, even amounting to partial monopoly, and where there is monopoly competition cannot be "free." As the fight goes on governments are forced to do more and more in the way of mediation and regulation, in order to prevent a violence disrupting to society. It may be the interference is intended only to restore a competition once free but so no longer. But this is just as much an interference with the processes of apportionment as more positive measures might be. The complexity of industrial processes, moreover, necessitates increasing supervision of them by government in order to make the wheels of industry run smoothly. More must be done each year in



Competitive oil well drilling: in the typical field with small holdings, a successful well on one property is immediately matched with one on another property. The result is to make many wells do the work of a few. The diagram shows how drillings are made in pairs close to property lines. (Data from Bulletin 658, U. S. Geological Survey, 1917, Plate 4.)

the way of the legislative regulation of a thousand different phases of industry such as the imposition of taxes and tariffs, the inspection of foods and drugs, and the fixing of prices and standards of service and quality. The government may embark upon these activities without its individual members suspecting that it is reapportioning wealth, but it is actually and inevitably doing so whether its policies are so intended or not. When industry is as complex as at present, it inevitably comes to have almost the same delicacies of adjustment as exist among the various parts of a single machine. Nothing important can be done to production without affecting the apportionment of rewards, and indeed without affecting the ultimate expenditure of wealth and the uses of goods. The government cannot exert any great influence upon industrial activity without in some way allocating income to this individual or group rather than that.

Two inferences are clear from these considerations. In the first place, it is no longer necessary to argue whether or not the apportionment of wealth should be regulated by governments and other social agencies. The fact that it *must* do so and that it actually *is doing so* can be taken for granted. The question is rather *how* it should regulate apportionment and *to what extent.* In the second place, one cannot get far without discussing how apportionment actually goes on under present arrangements. What is this process by which goods are distributed as rewards among the members of society at various rates? Or rather, since it is not a process by itself, but merely a part of the industrial process as a whole, how does this industrial process come to confer large incomes upon some individuals and small ones on others?



GOV. ROOSEVELT ACTS TO END DRESS STRIKE AS 25,000 WALK OUT

Calls Leaders of Four Factors in Industry to Albany for Conference on Friday.

ALL EXPECTED TO ACCEPT

Union Reports That Trade Is Paralyzed and Predicts Early Constructive Peace.

WORK STOPPAGE ORDERLY

Only Four Arrested—Loss Through Tie-Up Is Estimated at $2,000,000 a Day.

Approximately 25,000 men and women employed in the dressmaking industry here went on strike at 10
to reorganize
to elimi

(From *N. Y. Times*, February 5, 1930.)

CHAPTER 27

WHAT INCOME IS

1. *Wealth and Income*

The income of an individual consists of all the forms of wealth which flow to him annually to pass through his hands or to be finally used up. These include both material things and immaterial services. A list of the material things obviously would include such items as the following: all the varieties of food, of clothing, and of shelter; factories, warehouses, office buildings; steamships and railway trains; flowers, furs, and perfumes; wool, cotton, and wheat—and so on throughout the catalogue of the world's economic goods. The immaterial services would include the surgeon's skill, the painter's art, the actor's talent for entertainment, and the like.

Some material forms of wealth—factories, warehouses, office buildings, steamships, railroads. These are income, made liquid and transferable by "securities." (Photo Ewing Galloway.)

Some of these, it will be seen, are in final form, ready to be used up, to be worn or eaten or enjoyed in other ways; some of them are in a final form to assist in further production (factories, machines, and tools); and some are in a raw or intermediate form on their way to becoming goods which later may be used in final consumption. The question arises: are all these to be called income? The answer is that they are. All of them are owned by some one or by some group, and the evidence of this ownership exists in the form of certificates of ownership which are, as we say, negotiable. This means that one can sell them, and with the money received can command consumable goods. Anything which enables us to command goods is income. And all the products of industry are, therefore, income in every sense of the word. We may not consume all of them finally and at once. But that is because we choose to use them as the instruments of further production—to consume them in industry. They are not the source of immediate enjoyment to some individual or family, but they will result on the whole in greater enjoyment for individuals and families in the future.

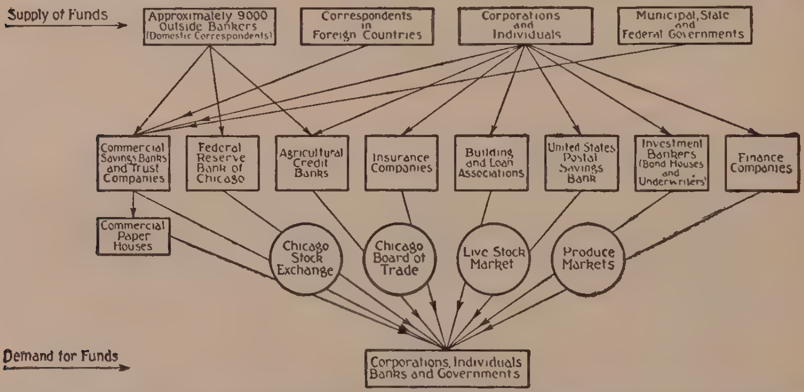
2. *The Part Money Plays*

This leads us to make the general statement that practically all our income, in modern society, comes to us in the form of money, and is, by this device, made fluid or interchangeable, which is to say that it may be transformed at the will of the recipient into any of the forms of wealth we have enumerated above. It may be spent, for instance, or it may be saved. If it is spent it goes for something to be used up immediately—to be enjoyed; if it is saved, it is perhaps invested in securities or in insurance of some kind, or, it may be, it is intrusted to the care of a bank. In any case, if it is saved, it is simply spent by another person for another purpose—by the businesses to which the bank makes loans for the factories or the raw materials or the machinery for carrying on industrial operations.

All this really marvelous fluidity is achieved through the medium of our exchanging mechanism and by the simple device of making money the common denominator of every good and service generally available in the community. The fact that money is so useful a device often leads the uninformed to the not unnatural conclusion that money in itself is a good. For do we not speak of So-and-so as having so many dollars and as "being well off"? True we do; but what we mean, really, is that So-and-so possesses so many dollars' worth of purchasing power which is liquid and may be made to command whatever goods he will. As a matter of fact money in itself is of no use for consumption; and income expressed in money terms does not indicate the enjoyment to be had from it; only when the money has been transformed into goods can we begin to see what is the real income of the person or the group possessing it. For this reason, problems of the apportionment of income involve not only the partition of the money income but also the partition of the goods income of society.

3. *Contrast Between Money Income and Goods Income*

This is made clearer by contemplation of the fact that a person or a group actually may have a comparatively large money income and yet be poor in goods; or may, in contrast, have a small money income and yet be able to maintain a fairly high level of living—to have comparatively large receipts of food, clothing, and the other things we live by. There are two reasons for this. One of them is that we differ in our ability to turn our fluid incomes into goods—we are more or less wise in choosing, more or less efficient in spending and using.[1] The other is that the dollar itself which we use as a common denominator, has as its standard a certain weight of gold, and that gold itself is variable in its power to command other goods in exchange for itself. So that if one has five dollars to be spent or saved now he may be able to buy more goods with them—if he chooses to spend them—than he might be able to buy in a year from now. Contrariwise it may be that if he saves them they will command more goods later on. Obviously the volumes of spending and saving would be affected by the anticipated vagaries of the dollar. And this actually happens. It is no part of our purpose, here, to discuss the value of money, though the student will find it profitable to pursue the problem further.[2] It is merely pointed out that money income may not be wholly indicative of the size of the goods income because of the fluctuating power in exchange of the very dollar itself.


Supply of Funds
Approximately 9000 Outside Bankers (Domestic Correspondents)
Correspondents in Foreign Countries
Corporations and Individuals
Municipal, State and Federal Governments
Commercial Savings Banks and Trust Companies
Federal Reserve Bank of Chicago
Agricultural Credit Banks
Insurance Companies
Building and Loan Associations
United States Postal Savings Bank
Investment Bankers (Bond Houses and Underwriters)
Finance Companies
Commercial Paper Houses
Chicago Stock Exchange
Chicago Board of Trade
Live Stock Market
Produce Markets
Demand for Funds
Corporations, Individuals Banks and Governments

The demand for and the supply of funds is roughly charted here. Prices for funds are fixed in much the same general way as prices are fixed for goods. (Adapted from *Bulletin 17*, Univ. of Ill., Bureau of Business Research.)

These latter considerations are important because practically all our income reaches us in the form of money and is expressed first in dollars; and also because the numbers of dollars which come to us are determined by the various mechanisms for exchange which have grown into the very fabric of industrial society. There is a market for almost every good. There is even a market for money. And the essence of market is that there exists a buyer and a seller. We all of us take many things to market and come away with many other things. Whether we come out generally well or ill in these market transactions of ours determines whether we shall have a large or a small number of dollars to be translated into goods. Here again we have to take account of the unstable dollar; for what we have gained or lost in the market in dollars may be shifted before our transformation of the dollars into goods is completed.

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[1] Cf. the chapters on using goods, which follow, for a full discussion.

[2] Cf. for further reading: B. M. Anderson, *The Value of Money*, or Foster and Catchings, *Money*. Cf. also *supra*, our chapters discussing the financial organization.

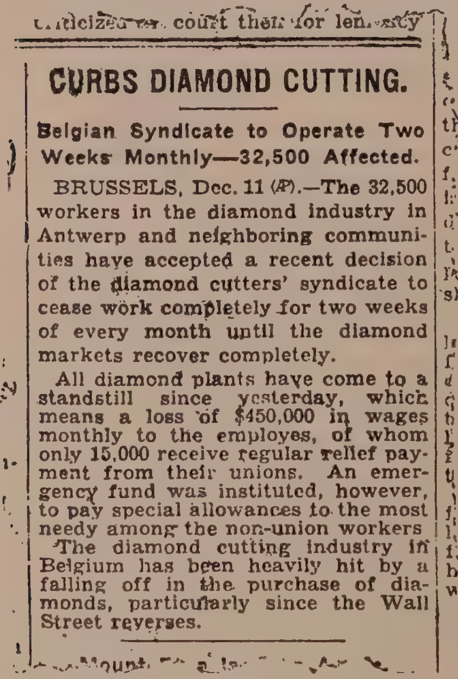
The study of income apportionment has to consider all these matters. Obviously, however, we shall have to consider only the broad aspects of the whole distributive problem. Because of its extreme complexity, for instance, we cannot pursue further the idea of the shifting power of the dollar to purchase. We shall have to confine ourselves to a consideration of the ways in which relative advantages are gained in the markets of society, and incomes thus determined, for all persons as individuals or as members of social groups which receive collective income.

CHAPTER 28

HOW INCOME IS APPORTIONED

1. *By the Position of Relative Advantage Gained by One Party or Another to Price Transactions*

In general what gives an advantage in any market situation is power over either the supply of or the demand for the product being dealt in. Perhaps the most usual advantage is the *control of supply.* When it is possible to restrict the amount of a good which comes into the market and when the desire for it is still undiminished, there is certain to be an increase in its price. And this increased price goes to the owner of the good in exchange for the transference of his rights of ownership.



CURBS DIAMOND CUTTING.

Belgian Syndicate to Operate Two Weeks Monthly—32,500 Affected.

BRUSSELS, Dec. 11 (AP).—The 32,500 workers in the diamond industry in Antwerp and neighboring communities have accepted a recent decision of the diamond cutters' syndicate to cease work completely for two weeks of every month until the diamond markets recover completely.

All diamond plants have come to a standstill since yesterday, which means a loss of $450,000 in wages monthly to the employes, of whom only 15,000 receive regular relief payment from their unions. An emergency fund was instituted, however, to pay special allowances to the most needy among the non-union workers.

The diamond cutting industry in Belgium has been heavily hit by a falling off in the purchase of diamonds, particularly since the Wall Street reverses.

The diamond industry is one of the most suggestive examples of the power to affect price by limiting supply. Yet here is an instance in which a decline in demand was determinative. Note how subsidiary incomes were affected by stagnation in the Antwerp factories. Price changes always affect someone's income—but effects are never confined to one income. Influences spread in devious and unexpected ways. Not only workmen, but merchants from whom workmen buy in Antwerp must have been affected—and so on. (From *N. Y. Times*, December 12, 1929.)

Monopolies of all kinds use this device for increasing their incomes. But one need not be a monopolist to have an advantage in the market, for this is an affair, often, of slight advantages rather than great ones. Whenever the supply of a good is diminished, there is an effect upon the price of it which is beneficial to its owner. The power to reduce by a hundred bushels the normal daily supply of potatoes in New York City would influence the price, though the influence might be so slight as not easily to be discerned.

It is worth noting that this price is paid by buyers because they are forced to buy and because their bargaining position is weakened. This weakness is the direct result of the fact that there is less than is wanted of the good.

This is relative too, for there is scarcely ever a situation when, if there were no price at all—if they were free—almost any goods or services would not be demanded in immense quantities. It must be obvious that when we say the buyer's position is weakened by a diminished supply, and that this weakness is the result of the fact that there is less of the good than is wanted, we mean to say *less than is wanted at the old price.*

At the old price not every one can share in the product. There would not be enough to go round. And the attempts to share in it, which are registered on the market by the offers of buyers, result in an increase of the price; this discourages a sufficient number so that all who are willing to pay the newly established price can have their desire gratified. But this is all to the advantage of the seller, for he receives the increased price and thereby has his income enlarged.

This simplifies almost beyond recognition the actual market transactions of our economy, but it does serve to generalize the results. Many markets are, in a sense, hidden markets. Often we do not realize that we are measuring strength against sellers when we are buyers, or against buyers when we are sellers; but we are. The results may not be at once apparent; they may come out only in the very long run; and the forces which make them may, therefore, be very obscure. But the services all of us render and the goods all of us sell have a price placed upon them in some fashion, and the size of that price determines our gross incomes. Then by the reverse process we help to price the goods we must buy, and the prices we have to pay help to determine how great a quantity of them we can have. Our *necessary expenditures* subtracted from our *gross* incomes show how much our surpluses are, which are available for improvements of consumption, or for savings.

Anyone who owns any part of a good limited in amount possesses a certain advantage in the market. This advantage can only be gauged at its real income-producing power when the desires of buyers are finally registered in the market, however. Then it is possible to tell whether the advantage is a strong or a weak one.

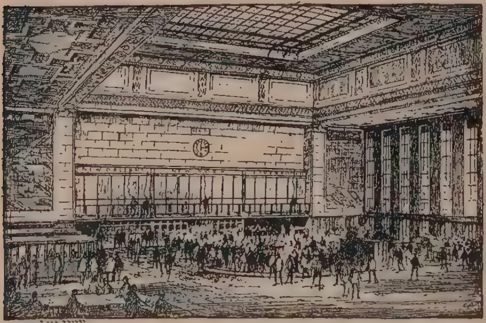
2. *By Speculative Anticipation of Price Changes*

Another way of increasing income very common in our economy is the *speculative anticipation of changes in supply,* to which we refer only briefly here since it has already been discussed in several places. When such a change can be forecast with anything like certainty, the forecast can be used as the basis of dealing in future contracts for the good involved. There is a very highly elaborated system of market exchanges for just this purpose; and a good deal of effort is spent in various ways to predict accurately what is likely to happen to supply. If supply changes, price will change, moving either up or down as the case may be. And one may buy if he thinks it will rise. If he has judged correctly, he will gain. There is a social purpose served by this speculative function. If speculators, anticipating a shortage, say, of wheat, when the crop comes in, buy briskly for a time, the price will surely rise; and the very fact of its rise will tend to check buying. So the consumption of the good is retarded in advance of the actual shortage which might occur. Similarly if it is anticipated that the price will fall, and if speculators begin to unload or to "sell short"—that is to contract to deliver wheat in the future which they do not yet own, but which they expect to be able to secure cheaply since the price is expected to fall—consumption is stimulated and the stocks of the goods are used up before the new flood reaches market.

Speculators, of course, do not perform this function because there is a social purpose served by it; but rather because, if they are clever, they can enlarge their incomes from it. This speculative anticipation is not confined, either, to professional brokers. All of us anticipate more or less and accommodate our buying and selling activities to the changes we expect to occur.

3. *By Being Placed in a Lucky Situation*

One other important way of increasing income through the control of supply must be mentioned. If it is true that many of us make *conscious efforts* to anticipate what is going to happen and so place ourselves in a position in which we shall benefit from the price changes that are expected, there are also many of us who, *without any thought of the matter*, find ourselves in such a situation. This fortuitous or "lucky" placing in a favorable situation has, of course, the same advantages for the individual as though he had planned it. Suppose, for instance, that one happens to be a sugar merchant who customarily has ten thousand bags of sugar on hand at certain seasons of the year; and suppose that just at the time when the storage is at a maximum, the price moves up one or two cents a pound. There is an enormous "lucky" profit. It was not planned, because nothing of the kind had been anticipated and nothing had been done to bring it about. It just happened, perhaps, that there was a storm in Cuba or Louisiana which destroyed a part of the growing crop and so brought about an unexpected shortage.



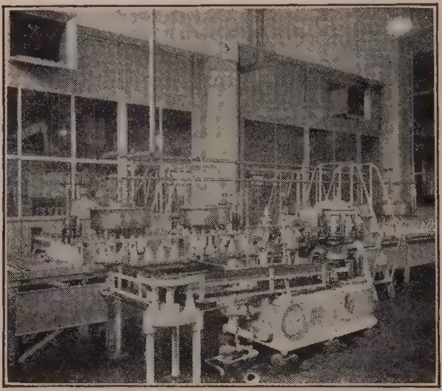
Interior of New York Cotton Exchange, one of the best known market exchanges in the world. (Courtesy N. Y. Cotton Exchange.)

The business cycle has been explained in a previous chapter as a movement, in rhythmic fashion, of the various forms of business into prosperity and depression and into prosperity again. It manifests, among other characteristics, shiftings in the levels of price, activity and stagnation in manufacturing, and overwork or unemployment for laborers. This cycle, which is continuous, but so irregular as to be unpredictable in the exact time and quantity of its movements, is perhaps the greatest single element of uncertainty in our system and causes the greatest amount of lucky gain or loss to all the individuals of society. For no one is exempt from the influence of its changes. Owning goods when there is prosperity, when every one wants them and when prices are high, is a very fortunate thing; but owning them when their prices are falling is equally unfortunate. One is likely then not to be able to dispose of them even at "cost" and is apt to have to accept a loss.

This cycle in business, is, however, by no means the only way in which fortuitous gains or losses of income are made. We may merely mention a few others. Farmers in one part of the country count themselves fortunate when there is a crop failure in another part; any invention of new processes or machines may suddenly cheapen the making of a good; one may own a piece of land upon which coal or oil is discovered. Even the fact of being born with extraordinary talents, for which society happens to be willing to pay well when one happens to be alive, is in a sense the good fortune of the individual. All these furnish a control of supply which helps to increase income, and that without any particular foresight, effort, or achievement on the part of the recipient.

"Lucky profit" in oil is a conspicuous illustration of the part fortuitous advantage plays in the apportionment of income. (Courtesy The White Motor Company.)

All this may, again, not involve the control of supply, though control of supply is perhaps more usual. It may take place through the *control of demand.* It will easily be seen that one is in as good a position to take advantage of one's competitors if he controls the demand for a product as he would be if he controlled the supply of it. He limits the places in which it may be sold and the amounts which may be disposed of and so tends to reduce the prices of the goods he buys. This makes as real an inrcease of income as the other method. Consider, as an example, the position of the meat packers in Chicago or that of the market milk dealers in almost any city. If the people who own fatted animals or who have milk to sell wish to dispose of them at all, they can do it only through the organized market, which is controlled by a limited group. And this limited group, controlling the sole practicable market, can hold the price down so that a distinct advantage is gained. The seller is relatively weak when there are few buyers, and he is therefore in no position to drive a good bargain.



This is a bottle-filling and capping machine. The necessary equipment for the efficient preparation and distribution of market milk involves such considerable expense, that the market is easily controlled by a few middlemen. (Courtesy Borden Farm Products Inc.)

Changes in society anywhere which affect the prices of the goods under consideration will have as great an effect here in favor of buyers as they might have, under other circumstances, in favor of sellers. The difference is, of course, that they have in this case to be changes which cause prices to fall rather than to rise. In every business cycle there is a period, for instance, when there are well defined "buyer's markets" when goods can be bought at discounts which on the whole may be very profitable to buyers. The important phase of this matter to be noted for our purpose here is that these changes take place and these gains may accrue to buyers through no virtue of their own, but simply because they happen to be in a favorable position at a certain time.

4. *By Dependency upon a Successful Bargainer*

It will be obvious that there are many persons in the community who do no active bargaining as either buyers or sellers on their own account. Such, for instance, are the social dependents of all kinds—small children, the very aged, and the sick or insane in institutions. These neither buy nor sell but have their incomes, in the form of goods, conferred upon them gratuitously either by some individual such as a father, a mother, or a guardian, or by some social group, such as a hospital association or, in many cases, the state.

But there is another large group, also, which has all or part of its income conferred upon it not because of any successful meeting of market conditions, but simply because of good fortune in happening to be a relative of, or large recipient of benefactions for some other reason, from some bargainer who has accumulated rights to more income than he cares to use himself. A considerable part of the total income of society is thus apportioned to the members of families of wealthy persons or to philanthropic or educational institutions in the form of negotiable titles to property which may be transformed into whatever kind of wealth happens to be desired.

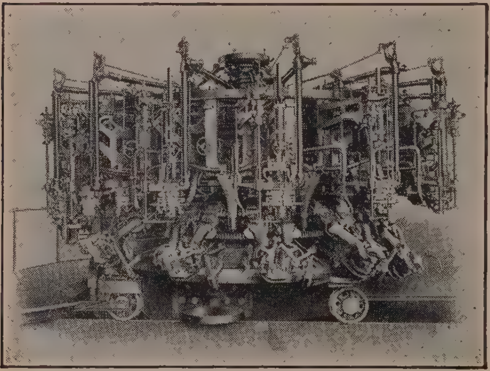
It is by this right of transference, which society allows—with certain restrictions—to good bargainers or to persons who have been lucky in bargaining, that the "leisure class" of society, so-called, is created and maintained. Its members have calls upon income which they have not directly earned. The dangers from this kind of transference are numerous; among them are the carelessness in spending which goes with easy acquisition and the establishment of impossible standards for other individuals whose incomes are more limited. There are also the bad effects upon the favored individuals themselves, who are overapt to become slothful and useless so far as the productivity of their lives is concerned.

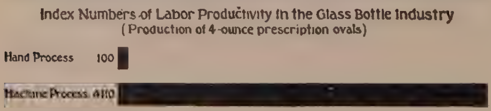
Tea time at the Casino, Monte Carlo. "Easy come, easy go" is an old adage which explains the existence of such palaces of pleasure as these in the resorts of the wealthy. Many Americans winter on the Riviera. (Photo Ewing Galloway.)

But, it is also true, much income thus given to dependents of the industrially successful is quite as well used as though these individuals had earned it. It is not the source of income which counts; it is the consequences of its use. So that when we seem to condemn the apportionment of income to those who have done nothing to "deserve" it, we mean to condemn only the more usual consequences of this apportionment; and we should have to make an exception of the cases in which this income is well used. For conferred income often goes to the support, not of wasteful individuals, but of charitable and educational institutions whose work is justified by the results achieved. Put to these uses, income often results in an actually greater increase in welfare than might result if it had been more equitably apportioned among "earners" in the first place. For the fact of earning ability is no guarantee of ability to use wisely.

5. *As a Result of Superior Productivity*

If it is true that income flows chiefly to the shrewder and the luckier persons and groups, under our present arrangements; and if it is in the various market places of our industrial society that the size of incomes is determined, what becomes of the ordinary notion that superior productivity yields increased income? Is it true that efficiency in production has no determining effect upon income? The answer to this is that superior productivity only yields greater income *as it affects the market position of the producer.*




Index Numbers of Labor Productivity in the Glass Bottle Industry
(Production of 4-ounce prescription ovals)
Hand Process 100
Machine Process 4110

In an instance of this sort, in which the introduction of a machine multiplies productivity many times, incomes are certain to be affected by the change. Owners of the machine reduce their costs enormously they can reduce prices sharply and still make larger profits than before. The workers formerly engaged in the occupation are thrown out of work and lose their incomes completely. (Photo Courtesy Owens Bottle Co., Data for chart from Bureau of Labor Stat.)

If we suppose a business firm which is manufacturing, say, shoes for the market, and makes the discovery of some contrivance or process which greatly increases efficiency, the effect is, of course, to put the firm immediately into an entirely new relationship to the market. It has now reduced the cost of the shoes it makes to the point where it can either reduce the price beyond the level its competitor can reach, and thus get, if it cares to, a much greater distribution of its product, or it can continue to sell at the old price and pocket the fruits of efficiency. In either case it profits enormously, the measure of gain being the difference between the new and the old ratios of cost to price. This, however, is temporary. Sooner or later others in the same occupation will make use of the same contrivance or process and thus put themselves in as favorable a situation. What may delay this is protection by patent or by the attainment of virtual monopoly, which makes any competition ineffective unless instituted on a grand scale. In the meantime, however, the firm is in a position to make the most of its advantage and will proceed to do so. The profits are, in a sense, the fruits of productivity, because at the same time that the consumer is getting his shoes for an equivalent or a less price, the firm is being enriched.

It often occurs, however, that the superior producer does not receive any considerable share of the rewards of his superiority. An unfortunate position in the market may force him to hand these over to some one else.

It may, perhaps, be good public policy to force a sharing of these benefits with consumers, but we are not so much interested in that problem here as in seeing that superior productivity may increase incomes—but only through the increase of bargaining power in the market.

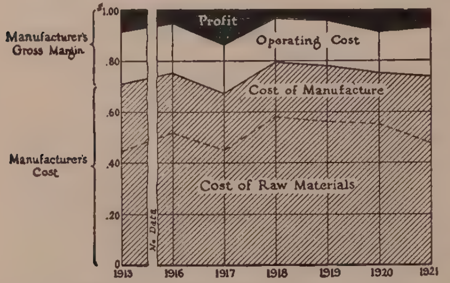
Here again, if we look into the causes of success, we often find that superior productivity is itself a result of one of the various kinds of luck above mentioned; such as being close to a newly discovered coal mine, or being able, through fortunate bargaining, to command the services of experts. Argument on the basis of rights proves nothing. It may be very true, however, that society can profit by rewarding superior producers, and thus stimulating efforts. This it does by conferring patents and allowing partial or temporary monopolies. But it limits, and may be wise to limit, considerably the extent of such reward, for fear of excessively handicapping other producers.

6. *By the Institutionalization of Advantage*

We come now, in explaining income apportionment, to the important fact that a market advantage, once gained, may become more or less permanent —may become institutionalized. This may happen through the development of *social habit* or it may happen through its *fixation by legislation or charter*. So that, not only does the individual, the firm, or the group, gain from one successful market deal, but it also places itself in a position to gain continuously in similar situations for a long time to come and so, by one effort, insures the receipt of continuous income.

This helps to explain the relative strength in the market of bargainers who may seem to be passive; for once an advantage of this sort is established it requires considerable force to overcome it. Such for instance is the case when a customary price has been fixed for any good or service. We live just now in a time when customary prices are not strongly intrenched in people's minds, but in a period of greater stability the strength of usage becomes very great. The five-cent loaf of bread was one of these customs. It required an exceedingly strong position on the part of sellers to raise the price after its years of immobility, though once the custom was broken, the price might continue to shift upward or downward with much less reluctance. A fixed price of this kind, it will be seen, has the effect of giving now buyers, and now sellers, an advantage. For when they must pay high for their flour, bakers would like to raise the price of bread; if they cannot, they are squeezed between rising costs on the one hand and fixed price on the other. Meanwhile the consumer benefits. Similarly if the price of the raw materials should fall, the baker's margin of profit would rise (and his income be increased), and the consumer would find himself paying a higher price than he might pay if there were not a customary price. The secret of the fixed price of this sort usually is that there is a long period of stability of all prices when it is advantageous to the sellers to have a fixed price. The genuine ignorance of consumers concerning the forces of the market, together with their individual inability to bring much pressure to bear anyhow, also plays a part.

Similar in kind to the fixed price is any kind of fixed habit of use, for a fixed habit is apt to make buyers weak and sellers strong in bargaining and therefore to affect their respective incomes. These rigid customs may be more than habits, really, as when a kitchen has been equipped for gas cooking. Then the bargaining power of the consumer is weak because he nearly *has* to have gas and would not stop using it if the price were to go up considerably. So great is this disadvantage on the part of buyers that public authority interferes in some cases to hold prices down. Railway fares are thus regulated; also electric power rates and telephone charges. The Supreme Court, in permitting this kind of business regulation, uses the phrase "affected with the public interest" and has shown a disposition to permit legislatures to regulate rates and prices whenever consumers can be shown to be at considerable disadvantage in bargaining with sellers of goods and services. Their interests are then "affected" and must be protected by the government.



This diagram shows how varying expenses react upon the bread manufacturer's profit. The basis of comparison is the dollar which the wholesaler pays for merchandise. (From Report of the Joint Committee of Agricultural Inquiry, H. R. Report 408, Pt. IV, 1922.)

But fixed habits of use are not confined to those of this kind. There are also those which are merely matters of custom, not of necessity at all. Such for instance is the habit of eating wheat bread, when corn bread would be cheaper and just as nutritious. The advantage to sellers is quite as great, however, when people only *think* they have to have things as when they *really* have to have them.

There are other ways also of getting a more or less permanent advantage in the market not yet spoken of. If consumers can sometimes persuade legislatures to hold down prices of the things they must buy, sellers also can sometimes persuade legislatures to hold up the prices of the things they sell. This happens when a high fixed rate is written into the franchise of some utility corporation such as a street-car or some other company doing a business for which it must have a legislative franchise. There have been many instances of this in the history of American business, especially during the latter part of the nineteenth century, when municipal utility corporations were being formed and when legislatures were not so particular as they have since become about the protection of the public against the aggressions of exploiting businesses.

The impressing upon the public of the virtues of some lavishly advertised good which is trade-marked or patented has this same effect of strengthening the position of the seller and weakening the position of the buyer. Tariffs also may have the same effect. What happens is that the public is stimulated to buy by advertising and the supply of the good is limited by artificial means. This gives the seller an advantage which can only be overcome by extraordinary resistance to persuasion on the part of the consumer.[1]

Then too, there are sometimes discriminatory laws which give one or the other group an advantage. Congress, for instance, has put a tax on the sale of oleomargarine which inflicts a disadvantage on its sellers. And there are other instances of laws passed in one state so regulating the conditions of business that costs are made higher than in other states where the regulations are not imposed. This is the effect of the regulation of wages or of working conditions in factories where they differ from state to state. This gives the unregulated seller an advantage which may considerably enlarge his income.

A last-minute rush to pay taxes in Boston. (Courtesy *The Nation's Business.*)

Graduated income taxes, also, are so arranged that they affect materially the apportionment of income. By their very nature, of course, they take a greater percentage from high-income receivers than from low ones. Where this principle of taxation becomes firmly established the low-income groups are favored over others and it may be that the upper group will be found to pay most of the public expenses.

Similarly there is considerable evidence for believing that there has been a long-time discrimination in favor of certain social groups in this country and against certain others. Farmers, for instance, have suffered from the policy of protection by tariffs that is traditional in this country and manufacturers and bankers as a class have benefited from it. Banking laws also have been framed usually so that their effects have been to discriminate in favor of bankers and so to increase their incomes at the expense of others. This kind of thing may happen whenever the lawmaking authority can be persuaded to make it happen; but it ought to be seen quite clearly that any such discrimination has a very real effect upon the apportionment of the social income.

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[1] For a discussion of the easy persuasion of consumers and the ways in which they are exploited see Stuart Chase and F. J. Schlink, *Your Money's Worth.*

CHAPTER 29

INDIVIDUALS AND GROUPS IN APPORTIONMENT

1. *Income Apportionment Partly an Individual, Partly a Group Matter*

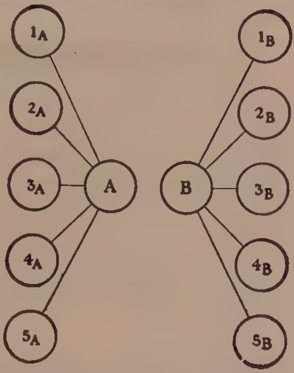
It should appear from what has been said that the apportionment of income takes place in the market places of society. And also it should appear that in the bargains made there people do not always appear as individuals, but often as groups with like interests. It may be that even when they do appear as individuals, their group interests help to influence their actions. How these groups are composed is evident only from a study of an actually functioning society. Perhaps the most prominent of them are what we call "businesses." Others are labor unions, employers' associations, consumers' coöperatives, families, farmers' marketing associations, and the like. It will be seen that "group" in this sense means simply any aggregation of people who act together in any way which affects the market. People may belong to more than one group; they may even belong to groups which act in opposition to each other, as when a person belongs to a business group and a family or to a consumers' coöperative and a labor union.

A pushcart market where individual bargains with individual. Yet even here there are the beginnings of groups for bargaining purposes. (Photo Hine.)

When economists formerly spoke of "classes" what they had in mind was a definition of classes as income-receiving groups. They had a conception of these classes as somehow coming into opposition to each other in the process of income apportionment. So wages were fixed by a bargain between the employee and the "capitalist" or the owner of the business in which he worked. This was a true enough description but it oversimplified the process by implying that there were only four kinds of income, wages, interest, profits, and rent, which went to the four corresponding factors of production, labor, capital, management, and natural resources. We are more inclined now to a less simple explanation. We say that there are as many kinds of income as there are kinds of productivity. Any activity or resource which helps to create utilities is productive of income. And the possessor of these activities or resources is engaged not only in making or using them but in making a bargain to buy or sell them.

2. *Group Bargaining*

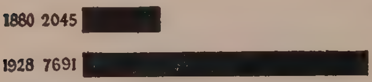
Men group themselves around these productive or consumptive activities and there are formed, as a result, more or less organized and definite markets where valuations are made and the prices paid over. One may have something to sell as an individual, but in modern society there are very apt to be group elements present; indeed, the whole bargain is likely to be made by group representatives, so that the individual appears only in choosing a representative. This can be seen prominently when the selling agent of one concern deals with the buying agent of another. Each represents the whole group engaged in the activities of the business. It may also be seen when the representative of a labor union bargains with the manager of a factory, the manager being, perhaps, only a hired representative of the owners—the stockholders.



This diagram represents, much simplified, group bargaining in modern society. 1A, 2A, 3A, and so on have permitted A to act as their agent in selling; and 1B, 2B, 3B, and so on have allowed B to act in a similar capacity for them. 1A never meets 1B, but a bargain is consummated between them which has an effect on their incomes.

These are two of the most conspicuous group bargains which take place in our society. A third is that between the final consumer and the retailer. But there are, of course, innumerable others of only less importance. And it is necessary to see that the group affiliations of individuals shift. One may belong now to one business group and now to another. He may belong now to a labor union and now to a farmers' selling association. His class interests are therefore not necessarily fixed for good and all. Similarly also groups may shift in relative social significance. For instance, banking businesses have become more important groups since 1850, and religious groups have declined in social importance since the Middle Ages; families are less significant groups in urban life than they were in rural life; employers' associations and labor unions play a greater part in the economic world than they formerly did.

But one of the most significant shifts going on just at the present time, and one likely to be overlooked, is the affiliation of all those who contribute to the making of a good (the creating of utility) on the basis of the thing produced. If this process goes on it will involve the decline in importance of one of the most costly social struggles of the nineteenth century—that between "capital" and "labor." This struggle between laborer and capitalist has been serious ever since the beginning of the industrial changes of the middle of the eighteenth century. It seems in many prominent instances to be mitigated by the growing movement for ownership among workers, who, when they become owners, become "capitalists" as well as "workers." If this movement should develop its expected proportions the struggle for income apportionment will take place more prominently in the goods markets of the future than in the labor markets. When businesses or even whole industries become finally consolidated groups, with a real unity of purpose and without the old contentions which have been so great a cause of unrest in the past, there may be a real chance of reducing the bitterness of the struggle for income apportionment. This will be because relations between contributory industries—those necessarily coördinate with one another—may be fixed by contract for long periods and may, on the whole, experience indicates, be carried on with less acrimony than those between opposing labor and capital groups.



Increase in the number of national banks in the United States since 1880. This furnishes some evidence of the shifts that take place in group importance over a period of time. (Data from U. S. Statistical Abstract.)

3. *The Advantages That Industrial Groups May Have in Income Apportionment*

One advantage a group may have is dependent upon the nature of the good or service it purveys. If the good or service is one for which the public demand is fitful and capricious, it is likely to be a somewhat unstable industry with a high bankruptcy rate, but also with the possibility of immense periodic gains. Women's clothing is of this nature; and so are most goods which might be called luxuries. Expenditures for these are apt to be first reduced when there comes a need for economizing. Being a part of a group in one of these industries may bring great gains for a time but in the long run is risky. Goods like bread, salt, sugar, and common clothing, contrariwise, people always have to have, regardless of what else they must do without. The business of purveying them, therefore, is apt to be steady; and if the profits are low, they are regular. The advantages of this are made plain by study of the types of business which have grown vigorous and strong and have ultimately developed to a gigantic size within the last few decades. Most of them are engaged in making or handling necessities or what have come to seem necessities by our generally raised standards. On the whole it seems to be an advantage to belong to these producing groups rather than to the other ones.

Another element of difference which may affect the advantages of a business is its inherent capability of rapid adjustment to the general price levels which, in our economy, are forever shifting. If we were to analyze the controlling factors here we should find them to be somewhat as follows: (1) whether the business is situated close (economically) to the consumer or relatively far away, (2) whether the "overhead costs" are great or small, and (3) whether the rate of turnover is rapid or slow. Each of these requires some elucidation.

Women's dress has always been a conspicuous field for the expression of capricious tastes. The styles are subject to rapid change and the business of purveying them is consequently extremely unstable.

Businesses in too close juxtaposition to the ultimate consumer may not be able to make rapid adjustments to a changing price level because of the well-known tendency of retail prices to become fixed or customary. A comparison of wholesale price changes with retail price changes over almost any period will show wholesale prices rising and falling with greater rapidity than retail prices. But also they will be seen to fluctuate much more rapidly than the prices for farmers' goods. So retailers lose by the inflexibility of their prices as well as farmers, those who are closest to the consumer and those who are farthest away. The situation in the middle seems to be the most favorable on the whole, though in a time of rising prices farmers' and retailers' prices may rise more rapidly than manufacturers'. In depression, however—when prices fall—the situation of farmers and of retailers is more unfavorable relatively than was their favorable situation with prosperity and rising prices.[1] The whole matter is too complex for easy generalization, and there would be found to be exceptions to any rule in the matter. But the movements of prices do seem to indicate that the middle situation is the more favorable one. The situation is clearest when the manufacturer is compared with the farmer.

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[1] This is to say that one group loses more in the period of depression than it gains in the period of prosperity. It can be seen by comparing the prices charted in the accompanying diagram. If it occurs to the student to wonder how this can be, he will be interested to know that it is because some industries go on selling their goods for long periods below the cost of production. Farmers are notable for this. They go on for long periods selling below cost for one reason because often they do not know their real costs and for another because when they do know, they cannot quit because farming is more than a mere business.

COMPARISON OF RETAIL PRICES, WHOLESALE PRICES OF ALL COMMODITIES, AND FARM PRICES, 1913–26[2]

	Retail	Wholesale	Farm
1913	100	100	100
1926	160	151	136
Difference	60	51	36
High	203	226	209
Low	100	98	100
Difference	103	128	109

This table shows that prices received by farmers and by retailers fluctuate less rapidly than wholesale or manufacturers' prices. This means that manufacturers make more rapid adjustments to changed conditions than do either of the other two groups, and are therefore in a more favorable situation. Retailers are faced with customary prices and farmers with excessively high overhead costs and slow turnovers of capital. Retail trade has undergone an economic adjustment to this situation by the coming in of chain and department stores; but no such change has taken place in agriculture. The income position of American farmers will remain permanently below that of other groups until some comparable economic reorganization takes place.

A manufacturer "turns over" his stock several times a year; but a farmer is lucky to average as many "turnovers" in ten years. This is because much more time is required to mature cows or orchards or even grain crops or vineyards than to make shoes from leather or bread from flour. Likewise the fact of slow maturity means that "overhead costs" will be high because permanent investments must be large. One must go on investing in a New York State orchard for twenty years before he receives much in return; a cow returns her investment only after eight years. And so it goes. But the retailer is in a less fixed situation and a considerably more favorable one than the farmer. If his turnovers are slower than a manufacturer's, they are much more rapid than a farmer's, just as his "overhead" is greater in the one case and less in the other.

All this means, to go no further into detail, that a business possesses a distinct advantage in existing in a middle position with respect to the consumers who form its ultimate market. And this advantage is one which is certain to be registered in income. For proof of this, one need only contrast the prosperity of grocers, druggists, clothiers or, nearly any other group of retailers with that of manufacturers, and then contrast this again with that of the farmers who are the producers of raw material and who carry on their occupations at the greatest relative distance from the ultimate consumers.

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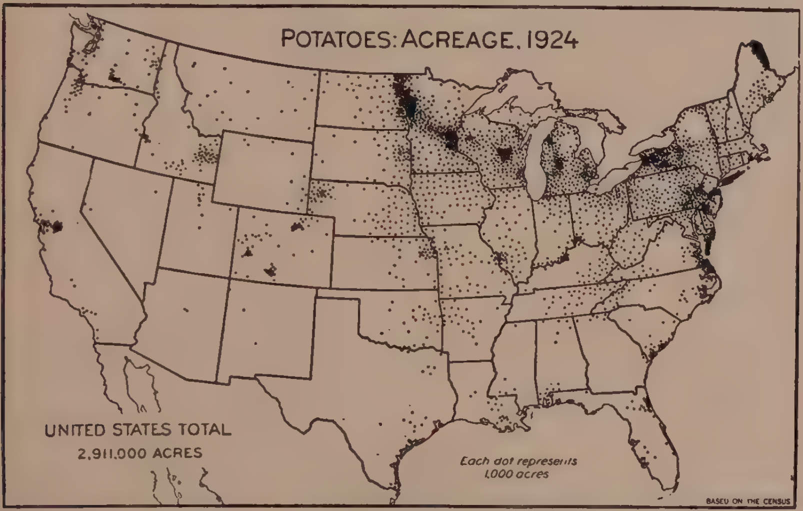
[2] Figures from statistical abstract of the U. S. Census, 1926, p. 313.

Some groups also have an advantage in their superior cohesion, for cohesion gives very definite market power. The degree of association seems to be determined largely by the physical conditions of the industry. For instance, to use again the agricultural industry for illustrative purposes, farmers are bound to be disorganized by the very fact that they have difficulty in getting together. This is much less true of manufacturers or of middlemen. In the first place they live together in cities: and in the second place their businesses are of a sort to make it advantageous to do business on a large scale even if there were no market advantages in associationism.



Potato growing, because its acreage is so widely scattered, offers a good illustration of an industry in which association for better bargaining is difficult. (Courtesy Bureau of Agr. Economics.)

For these reasons they gradually cohere and form large-scale organizations more rapidly and effectively than farmers. Once having formed them, they find a great advantage has been gained in bargaining on the one side with disorganized farmers and on the other with equally disorganized consumers.

Finally, we ought to consider here the relative abilities shown by different groups in institutionalizing their advantages. Plenty of illustrations are available. For example, this country has fallen into the habit of giving tariff protection to its manufacturing industries. This was unavoidable when they were developing and were more or less necessary to the progress of the nation. But now that they are full-grown and stronger than those abroad, even, we continue the protection because we have formed the habit. Similar results follow from strenuous and effective advertising campaigns. Once a habit of use is established it tends to persist unless something interferes, irrespective of the rationality of the procedure.

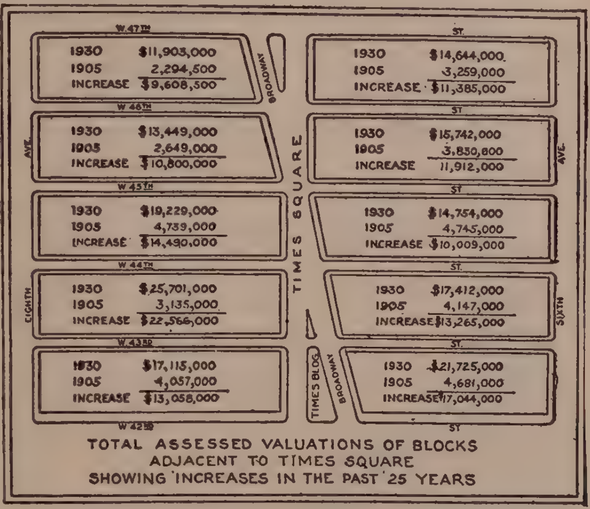
The whole problem of income apportionment, it is obvious, is not to be understood by a study of groups and their advantages and disadvantages in the market. For individuals within the same group very often share differently in the partition. So that, besides investigating the situation of groups with respect to income, we need also to inquire into the reasons why it is that the incomes of individuals vary. Why are some bankers richer than others; why do some storekeepers have high net profits and some others low ones; why do some laborers have higher incomes than others?

And we observe at once that there is a grave difficulty involved in disentangling almost any individual's group alignments. He may inherit some income-bearing property; he may have a salary from a corporation; he may trade in some article or render some service "on the side." All these serve to confuse one who is trying to understand the modern situation. If we want really to know the forces that make for differentiation among income receivers, we have to begin with the individual and trace the sources of his income (or his incomes); and then go on to study the advantages possessed by the various groups from which the income flows. Having done this, we may then return to the individual and investigate (1) the reasons for his affiliations and (2) the advantages possessed by him over the other members of his group.

Belonging to a group which has a distinctly favorable situation is in itself perhaps as great an advantage as an individual can possess. One gets into such a group in various ways. He may be "born" there, so to speak, or he may be helped there by some friend or relative. Again he may, by a combination of brains, luck, and hard work, force himself into it. At best, however, the "luck" element is very great. In a certain sense it is a great piece of good luck to be born with superior abilities. It is still greater luck to be born with the sort of abilities that are valued at the particular time one happens to be living and working. A Benvenuto Cellini would have much less honor in twentieth-century America than he had in Renaissance Italy. And Mr. Rockefeller would have functioned very ineffectively in twelfth-century Florence.

The differences among the varieties of formal schooling a boy or girl may have are also very sharp. Education may fit one for life; but it thinkably may also unfit one for any kind of life that can be found in the going world. But these are not all. It is the greatest luck of all to be favored by those great socio-industrial changes which sweep over the whole earth. Many a life has been wrecked by a business depression which occurred at a delicate juncture in a business career; many a fortune has been made by owning a piece of land the price of which was enhanced by social development. These changes, so all-important to the individual, are often quite beyond the scope of his understanding, much less the possibility of his control.

The reasons, then, why one belongs to this or that specific group are only to be discovered by knowing the individual's make-up—that is to say, the abilities which enabled him to get there and to stay there and which keep him from getting out—and by knowing as well the circumstances which favored him over others. These are obviously too complex to be gone into further here; and, anyway, it will be seen, they depend in great part upon the study of the individual and the peculiar situation which makes him unique. Also, if we want to know why A is a banker and so receives a large income, but also why B is a banker and receives a greater one, no general principles will be of the slightest help. Only a study of A, of B, and of their influences and their activities will allow us to arrive at an understanding.



An instance of the spectacular increase in the assessed valuations of urban land which has for so long been a feature of growing America. Land ownership is the foundation of many great family fortunes. (From *N. Y. Times*, December 29, 1929.)

All that we can say with any assurance is that the fortuitous element is so large in any career that one simply cannot work out, in the modern world, any basis for "rights" to receive income either on the basis of productivity—for here we are never productive alone—or on the basis of ownership—for individual ownership titles are apt to have a social reason for being. This dilemma which faces society in its attempt to find the criteria of reform for the processes of income apportionment, brings us to a consideration of the various ways of improvement which have been prominently suggested and seriously considered.

CHAPTER 30

THE AIMS AND METHODS OF REAPPORTIONMENT

1. *The Possible Aims of Reapportionment*

In describing how income is actually apportioned we have incidentally touched several times upon what the government and other social agencies are doing to reapportion it, or at least to influence the process of reapportionment as it goes on. We have even mentioned incidentally certain other possible public policies: for example, how far it is advisable to regulate prices, to grant monopolies, and to restrict business operations in the interest of public health or welfare. We may now look more directly at this question of suggested policy; in other words, at the question of how the levels of living may be raised by altering the system of income apportionment. This is partly the moral question of what constitutes human welfare: of what ideals are most worth striving for. But partly, too, it is a practical one of the methods most likely to achieve these results.

Willy Pogany, the American artist, here points to the most obvious aims which any program for the reapportionment of income must include: relief from insecurity, and some lifting, at least, of the heavy burden of poverty. (Courtesy *N. Y. Times.*)

As to the question of aims or ideals, it is, of course, impossible to prove the moral superiority of any one rather than another. Ethical questions are not susceptible of proof or even of exact investigation. Rather than assume any particular theory of moral ends and base our discussion on it, it will perhaps be more useful for us to take note of a certain trend in public opinion, a certain change concerning the accepted aims and ideals of economic policy.

To be sure, old ideals are still current and influential, though their origins and their implications are often unrealized by their advocates. People who have not devoted time to theoretical discussion are apt to take as unquestioned dogma certain moral and political principles which they have inherited from the past. Among these still current survivals of past economic thinking is the belief in a certain divine or vaguely occult sanctity surrounding the individual's right to private property, especially that which has been his or his family's for years, but also including that which he has gained by his own endeavors. But, without definitely abandoning such older ways of thinking as this, people easily come to modify them, to tolerate newer ideals, often inconsistent with the older, and to hold several conflicting beliefs at the same time. That is, along with this vague respect for the sanctity of private property, there exists a considerable tendency for practical men of affairs to think in terms of consequences. Without necessarily committing themselves to an altruistic code of ethics, and without being unusually patriotic or social-minded, they nevertheless, when pressed for reasons, justify their economic views in terms of social welfare. They acknowledge, in other words, the test of consequences as well as that of rights.

The state of public opinion now or at any other time, including the opinions of statesmen and captains of industry, is usually a mixture, not very clearly or logically thought out, of various current ideals. It is perhaps fortunate that our national leaders are not too logical and consistent, for a man who holds with dogged consistency to one ideal is apt to become a fanatical doctrinaire, and to do more harm than good. At present we are blundering through to a certain slow progress and correction of evils, not by any clear and conscious policy but by a process of random trial and error, partly guided by pressure in various directions, by various ideals, and by various interested groups. People will accept a certain high-sounding principle as unqualifiedly true in theory and act upon it until some other principle, equally high-sounding, attracts their attention. Not realizing the insufficiency of any one principle such as "free competition" or "protection of infant industries," they will act upon one principle until common sense comes to the rescue and advises moderation.

An account of the aims which actuate our present social activities in the reapportionment of wealth would therefore show a more or less blurred compromise between a great number of different aims. On the one hand there is a general disposition to respect the crafty and successful captain of industry who finds his way to the top; there is a disposition to allow him the fruits of his success, and not to waste much pity on the unfortunate losers in his business deals. The public conscience with regard to poverty finds an easy anodyne in saying that poverty is, in our free country, usually the result of laziness or stupidity. It requires the constant exhortation of humanitarian agencies to awaken interest in alleviating the most flagrant abuses. But, on the other hand, there is a lurking sentimentalism in the public mind that makes it shudder at cruelty and suffering beyond a certain point. So the same man who applauds the unscrupulous railroad manipulator may be moved to generous sympathy for the evicted tenant in winter or for the pathetically emaciated child laborer, and may turn that indignant rage on the heartless landlord. The citizen's belief in the sanctity of private property may be as firm as a rock when he talks with his fellow club members, but if he is caught at the right moment it may be possible to enlist his support for a law that could curb the powers of mortgage holders to foreclose, or for a law restricting child labor. Admiring the financial magnate, he will at the same time fear lest any one man in power gain too much control over public affairs. He will feel vaguely disquieted about the gigantic influence which a single chain of yellow newspapers, backed by enormous wealth, may exert upon the popular mind. He will agree that moneyed interests should, in some way, be prevented from bribing, electing, and otherwise controlling government officials. While agreeing that the hope of gain is a necessary incentive, he may fear that allowing one man unlimited gain will discourage others. For it is all too obvious that a financial advantage once gained tends to be cumulative, to keep on growing of its own inertia beyond all proportion to the original service. Thus, the self-made man, although a subscriber in theory to the idea of the sanctity of private property, may look with some indignation at the man who inherited wealth without doing anything for it. The business man who believes in the inspiration of free competition may feel it vaguely unfair that one man should be allowed not only to grow vastly rich himself but to keep on preventing others from similar achievement. If he were a little more thoughtful than the average he might inquire whether this policy of industrial incentives were not self-defeating in that it discourages a hundred individuals for the sake of allowing unlimited wealth and power to one.

Headquarters for the distribution of relief goods to the families of strikers at Marion, N. C., an incident in the prolonged labor troubles which are everywhere following the movement of the textile industry into the low-wage areas of the South. This is perhaps an unsatisfactory way of arranging the apportionment of income; but in certain industrial crises, there seems at present to be no other source of support for the affected groups of workers. (Courtesy Walter Ludwig, Pioneer Youth of America.)

The Roman slogans, "Woe to the vanquished," and "To the victor belong the spoils," appeal, up to a certain point, to popular sentiment. But if the victor proceeds to strike the weaker man when he is down, popular sportsmanship rises to protest. For this reason, it is not difficult to persuade most people, in theory at least, that every one should have at least a minimum of subsistence. Few people would be cold-hearted enough to acquiesce in actual starvation immediately around them. Governments, especially local governments, now engage universally and without protest in charitable enterprises for the very poor, the only fear in the public mind being that excessive bounty will encourage those who are helped to remain poor. For these charities the more prosperous public is taxed; in other words, wealth is redistributed.

There is general tolerance also for the practice of allowing economic rewards to many individuals other than the very poor, who do not, and perhaps cannot, win these rewards in severe business competition. While investigating and perhaps resenting the easy life of these more or less sheltered individuals, people have come to tolerate their support at more or less public expense. Scientific researchers, physicians, humanitarian workers of all sorts, are rewarded at the public expense and not by winning their share in direct competition with business men. Clergymen, artists, writers, and musicians, though not usually supported directly by the government, are often supported by endowments which set them on "islands of safety" somewhere apart from the harsh struggle for existence. Not realizing or perhaps agreeing that such practices are violations of the ideal of universal competition, the public seems to feel that society is wealthy enough to afford investing in certain activities of a cultural nature in addition to the production of material wealth. If, in order to support these activities, it is necessary to raise funds, no great outcry is made when the wealthy are taxed for that purpose, "due process of law" being easily revised for such purposes when the public sentiment is definitely in favor of them.

The carbohydrate laboratory of the Department of Agriculture, one of the many laboratories maintained by various departments of the Federal Government. (Courtesy U. S. Dept. of Agr.)

To summarize, we may say that modern public policy is still considerably imbued with respect for private property and for the processes of free competition by which wealth goes to the most successful in a keen struggle; but that there is a perceptible trend in public opinion toward some weakening in its respect for these sanctities when they seem to conflict with certain other desirable ends. Among this latter type of ends, which are of steadily growing weight in determining social policy, two are preëminent. There is first that implication of the democratic ideal which specifies granting to every individual, not equal wealth, but a more equal *opportunity* to develop his latent powers of public service and individual enjoyment. In the second place, there is undoubtedly an increasing respect for the ideal of developing the arts and sciences at public or semipublic expense, and for the devoting of more public energy to realizing the gentler graces of life at the sacrifice of some material wealth and power. If, then, it is necessary for society to embark upon redistribution of income in order to secure these ends, less violent objections are now raised than might have been raised a century ago.

2. *The Methods of Reapportionment*

To become convinced of the existence of this drift in public opinion one need only observe what extensive activities the governments of this and other countries are now carrying on in directing apportionment toward the ideals just mentioned. There was a time when such interference or indeed any large-scale government activity in industry would have been rigorously opposed by all-powerful capitalistic forces, assisted by all the influential elements in society, including the established church and the conservative universities. Even now the conservative tradition makes itself felt in stubborn fights, often supported by the Supreme Court, against the confiscation of property without due process of law. But the activities of the government in this field are steadily on the increase and are already numerous and varied. In the face of the tremendous pressure in this direction, such obstacles as constitutional checks are becoming slowly modified by reinterpretation if not by definite repeal. We shall now examine some of these activities.

A policy of noninterference by governmental authority is itself a positive force in directing apportionment. It means that consciously or not society is allowing its rewards to go to those most capable of wresting them from others in competition. This may mean the shrewdest individuals or combinations of otherwise weak individuals or it may mean, as we have seen, simply the individuals who profit by fortuitous turns of the market. When governments in the early half of the nineteenth century allowed combinations to arise and do business almost unchecked, they were tacitly favoring these combinations in the struggle. When, at the same time, they restrained laborers from banding together into unions to demand a larger share in the proceeds of production they were taking a more positive step toward influencing the apportionment of wealth. At the present time, when the governments tolerate trade unions and collective bargaining they are likewise, though seemingly passive, pursuing a policy which is a proven influence upon the distribution of income. Allowing the weaker to band together in their own defense is for practical purposes little different from actively aiding these weaker competitors in the struggle. One of the best illustrations of statesmen's violation of a much talked about *principle* when it was subjected to the test of consequences, was the definite permission given to farmers in the Clayton Act to organize associations of just those kinds and for just those purposes which they were forbidding in other business fields. Instances of this sort could be multiplied.

More actively, governments are now giving positive aid to private charity and endowment and are thus assisting voluntary efforts to achieve ethical ideals rather than unrestrained competition. In the first place, the creation of endowed foundations for this or that purpose in philanthropy, education, research, art, or religion, is definitely legalized. Such endowments are facilitated by the adoption of statutory methods for bequest and gift. After the endowment is made it is protected by legal devices from being devoted to methods other than those intended by the donors; in other words, the law countenances and assists the withdrawal of certain amounts of social wealth from competition and its devotion to noncommercial ends. In many cases, of course, this aid goes so far as the actual granting of exemption from taxation, as in the case of churches and some schools. The recent income-tax law in the United States allows exemptions for contributions made to recognized charitable purposes. Such facts as these do not appear at first sight to be positive methods of influencing the apportionment of wealth; doubtless, they are not consciously so intended. But actually they have this effect and no line can be drawn between these activities and certain others we are about to examine, which are much more obviously connected with reapportionment.

The Rockefeller Institute, a privately endowed organization, carries on research in medicine and public health. Members of its staff have made contributions of the highest importance to the science of public health. (Courtesy Rockefeller Institute of Medical Research.)

3. *How Government Affects Apportionment*

In several ways, the government actually takes away wealth from the strong and fortunate who have amassed it and places this wealth at the disposal of the weaker and less fortunate individuals. Such things as public parks, schools, libraries, and museums are available for all individuals, and usually no attempt is made to restrict the individual's enjoyment of them to an amount proportional with what he has paid for their support. They are simply created for the public use out of public funds, and naturally the rich who pay larger taxes contribute more to their support. Along with these indiscriminate public benefits may also be classed the educational scholarships which states and cities place at the disposal of students as well as the multitude of welfare activities carried on by state bureaus of various sorts for the purpose of education, philanthropy, health, and enjoyment. In a sense, too, all government activities for the collective welfare of the group, involve a reapportionment of wealth. There may be some doubt as to whether the poor benefit as much as the rich by the protection armies and navies afford to national property; and there may be considerable doubt as to whether all the administrative functions of congresses and legislatures are carried out without favoritism. Unquestionably, the burden of supporting these activities falls more heavily on the poor citizen, who feels a small tax more heavily than the rich man feels a large one. But, in terms of absolute amount, the rich pay more and there is no attempt to apportion benefits in exact ratio with the amount contributed. In other words, private property rights are more or less lost sight of. Wealth is poured into a common social treasury and expended there for the benefit of such members of society as the government may decide to benefit.

The New York Public Library, maintained partly by private endowment and partly by public funds. It has numerous branches throughout the city where any one may borrow books or do research. (Courtesy N. Y. Public Library and the artist, Mr. Louis H. Ruyl.)

The disposition to even things up at the present time is quite as strikingly manifested in the graduated income tax. Since the war, the United States and England have come to take for granted the propriety of such a law, although not many years ago it would have been an unthinkable violation of property rights. The problem is: should a richer man or company be taxed not only more because his income is greater but also at a higher rate than others? Literally this is discriminatory legislation, favoritism, it might seem, toward the weaker and less fortunate classes. Such a law never could have come into existence and been enforced with even the present measure of success, did it not express a growing popular belief that individual property rights must give way before the superior test which is the contrast in consequences. And they are found to be better when the rich pay high rates and the poor low ones. Human welfare is thus better served. The graduated income tax is definitely a device for the reapportionment of wealth, of taking from the rich and giving to the poor—not, of course, that the proceeds are handed out in cash among the poor, but that they are devoted to social enterprises in which the poor benefit out of all proportion to the tax they pay. The emergency of the war, when the collective interest was strongly brought home to all citizens, accomplished more in a short time toward accustoming the public mind to such violations of individual property rights than could have been accomplished in years of theoretical discussion.

The United States Treasury Building, Washington, D. C., headquarters of American public finance. (Photo Ewing Galloway.)

In the years since the war there has been a certain reaction back to individualism and away from extremely active interference with the apportionment of income. Even during the war, individualist sentiment and the power of capital were too strong to permit a general capital levy. There was little in the way of forced requisitioning of equipment and goods for military uses though certain governmental agencies, such as the War Industries Board and the Food Administration, exercised hitherto unprecedented interferences with private affairs. Certainly, however, these were equal in extent to the interferences with personal liberty of conscience and action under the draft law.

Forced confiscation of private property by the government for social use is undoubtedly feared as a general policy on practical grounds; the public is none too well convinced that the funds so obtained would be used intelligently and honestly or levied upon the sources best able to bear them. A heavy tax placed upon some function in the industrial system which is apparently well able to stand it, may easily result in weakening a necessary factor in production and may thus bring a net loss to society instead of a gain. The exact ways in which such burdens can best be imposed and genuinely beneficial redistribution of wealth effected, are still problematic, but the general principle that such activities are on the whole proper and wise when carried out scientifically, seems established beyond much dispute.

Theoretically, the policy of taking from the rich and giving to the poor could be extended to absolute confiscation of all incomes, to be followed by a redistribution, either equally or in any other way desired. An income tax could easily be made to read that incomes above a certain sum should be taxed 100%; in fact, this proposal is now frequently made. One-hundred-per-cent taxation might conceivably be applied to all incomes as earned. But to go this far would obviously mean interfering with industrial processes to a revolutionary extent. It would necessitate not only the use of great force to compel the payment of such taxes, but would also involve a stupendous problem in redistributing the vast sums of money so collected for the social welfare; and up to the present time, experience of the public with government expenditure has not seemed to most observers to be a warrant for believing that government could safely be intrusted with such vast sums for expenditure. A more fundamental difficulty than this with so extreme a policy of confiscation and redistribution is that it would most certainly disorganize industrial production. It would be too much to expect that production would run on wholly unaffected by so complete a transformation of the incentives that are now depended upon to secure productive effort. It would be impossible, in other words, for a government to embark on so large a scale on a policy of reapportioning income without exercising a more or less proportional control over production, substituting new incentives and new mechanisms of direction and correlation for those now in use. Certain reformers have long advocated such a scheme; but since it has never been tried there is no certain way of knowing whether or not it would be found to be workable in fact—and workability is, of course, the only test. All we can say is that no definite limit can be set in general to the extent to which government activity in apportionment can be successful; such limits must be found by experimentation.

4. *Reapportionment by Strengthening Weak Bargainers*

Along a rather different line, the government can play a part in evening up the incomes of its citizens. We have just been considering certain methods by which the government takes away wealth from the strong and fortunate after they have received it. But a somewhat similar effect may be secured by strengthening the weaker members themselves, and thus helping them to demand a greater share on their own account. We have mentioned this type of activity already, in regard to the government's passive toleration of collective bargaining, and there are many other instances of this way of reapportionment. The Sherman and Clayton acts, for example, were responses to the general feeling that in some way free competition was defeating its own ends. In allowing combinations to grow without limit in size, wealth, and power, and to use whatever means they desired, short of criminal violence or fraud, to gain business, society was really allowing free competition, what there was of it, to be destroyed before its very eyes. Individuals and smaller firms could not compete with these enormous and unscrupulous powers. Businesses such as these held their preëminence not only, and not perhaps chiefly, by superior efficiency, but by the sheer force of their gigantic size and by their unscrupulousness in competitive dealing. The existence of such firms, throttling competition, was a discouragement to the incentive of most business men. Convinced of the social undesirability of such a turn of events, the government decided to prevent, by the acts just mentioned, the forming of excessively large and powerful combinations, and the use of certain trade practices which seemed unfavorable to industry as a whole. The effect of the ensuing restraining acts was indirectly a reapportionment of income, although of course, it was not so intended. By decreasing the strength of the stronger, it made the weaker more able to compete with them, and thus to gain a substantial share in the national income.

The Interstate Commerce Commission in session. A government regulatory body, charged with controlling rates and service of common carriers such as railways, steamship lines, and interurban trolleys. (Wide World Photo.)

Such activities as the fixing of prices, rates, and profits have a similar effect in diverting the flow of income from channels which it would otherwise follow, and of directing it either toward the weaker competitors or toward the common treasury. We have already discussed the rôle of the government in correcting the disadvantages under which workers and farmers characteristically suffer; we shall shortly return to it again as the greatest of the general problems of apportionment. But just here the reader may be reminded that such social acts as the establishment of the minimum wage laws operate to strengthen the weaker individuals and to prevent the strong and unscrupulous from pushing them too hard against the wall. Like all other steps in this direction, minimum wage laws have been, for several decades, bitterly assailed, not only by the capitalists directly affected by them, but by theorists convinced of the desirability of unlimited competition. But, beyond question, general development is in the direction of more rather than less interference.

5. *The Productive Mechanism and Reapportionment*

As has been contended, a government cannot go very far in regulating the distribution of income without affecting the productive mechanism. And at present no western government is willing to undertake the control of production on a comprehensive scale. But once more, without attempting a comprehensive policy of this sort, it is quite possible to carry on many particular activities of a productive sort. It is possible, in other words, for the government, without becoming thoroughly socialistic, to exert influence in several areas upon industrial production, the result being that income is distributed in ways other than it would have been if it were not interfered with.

In the first place, government can and does subsidize certain productive activities which it believes deserve to be favored, though the subsidizing may not be called that. By passing a protective tariff, it may assist certain industries; in other words, add strength to competitors who would otherwise be weaker. By regulating banking it may favor—as it has favored—bankers. State and city governments also by granting franchises to certain companies for public utility operations, or by granting exclusive leases of public lands or resources to private firms for exploitation, are taking a hand in production as surely as though they were embarked upon a conscious program of government operation.[1]

The government actually carries on agricultural operations on a considerable scale—not in competition with other farmers because the experimental feature of government farming is most prominent. But it often raises products to sell. This is a pen of yearling Columbia rams produced at the Dubois, Idaho, Sheep Experiment Station. They were sold at the National ram sale at a record price. (Courtesy U. S. Department of Agriculture.)

Verging still more upon socialism, the government may and does embark upon some productive enterprises itself. At present, there is little done in this country in the way of extracting raw materials or manufacturing them. But in carrying on the postal system, including the parcel post, the government is conducting a productive activity which could conceivably be done by private agencies. With these activities as production, we are not concerned, but it is well to notice their distributive aspect at this point. When a product or service is marketed and compensation received, there is income to be divided up. The government, receiving compensation for its postal activities has an income to be divided among the employees who carry on these services. The fact that the income of such government activities is often thrown into the common national treasury, from which salaries are also paid, rather than being divided up directly for salaries, should not obscure the point that the government is really engaged in a productive activity, analogous to that of a private express company. How then is this income distributed? By what we choose to call the Civil Service system; in other words, on a scale proportionate to the estimated value of the service each individual renders, as judged by those in authority. Obviously, the extension toward the socialistic ideal of government control over production necessitates the reorganization of the system of income-apportionment in something like the Civil Service manner. A government completely in control of the activities by which wealth is produced and earned would have at its disposal the apportionment of that wealth. Eliminating the give-and-take of private competition, it would determine from a centralized position what individuals and groups were to be strong and what weak, what ones favored with large incomes and what ones restricted.

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[1] Further than this under the Jones-White Act and the Agricultural Marketing Act, definite support, amounting to subsidy is provided for strengthening the Merchant Marine and certain Agricultural activities. The government, by the judicious use of mail contracts, also provides further support for American shipping and for the development of Commercial Airways.

6. *The Middle Ground in Reapportionment*

The immensity of the task of controlling production from a central government bureau, we consider elsewhere in this book. Here it is appropriate to notice that the distributive aspect of socialism presents a problem likewise enormous. It would necessitate an untold number of specific judgments regarding the relative value of the contribution made by each individual and group to the social wealth and welfare; that is, providing rewards were to be on a basis of compensation for service done. That alone would be a task practically impossible of scientific accomplishment; judgments would of necessity be rough estimates. We have already seen, in several connections, the difficulty of determining the relative importance of the contributions of the various factors in production: whether, for example, the farmer is more important than the railroad man, the scientist or the banker; whether the country banker or the city banker is more important; whether this or that banker in the same city is of greater public service. At present, compensations are undoubtedly made without much relation to service rendered. But there is perhaps in a fair number of cases some approximate proportioning, and in any case the necessary distribution of income at least gets accomplished, justly or unjustly. Where definite, conscious valuations and decisions have to be made, a swarm of problems arise for which society is still without reliable answers.

In addition to the problem of deciding what share each member has earned, government supervision of apportionment raises the problem of what activities should be supported and encouraged. It may sometimes be advisable to support certain individuals who have accomplished little, in the hope that they will eventually contribute. It is for this reason that governments pamper infant industries, and that scientific laboratories are endowed without being required to produce immediate returns. At present no nation is carrying on a genuinely systematic program for the development of its cultural standards, including intellectual activities. Such things are allowed to take care of themselves, and are intrusted now to sporadic legislation, now to individual philanthropy, or to voluntary public support. A government policy of stimulating certain activities by directing a share of national income toward them would necessitate decisions upon what activities were most worthwhile for the life and progress of the nation, spiritually as well as materially. At present one is forced to recognize that no government, with the possible exception of Soviet Russia which we shall refer to later, has shown itself capable of making such decisions intelligently.

A government laboratory worker who is supported at public expense: engaged in experimental bee-breeding.

Between the two extremes of absolute neglect and complete control by government, there exists an enormous middle ground with regard to income apportionment in which free competition can be combined with centralized control in infinite degrees and methods. Without attempting complete control either of production or apportionment, the government may and does increasingly interfere at crucial points and moments to correct the most flagrant abuses (as with the minimum wage) and to stimulate certain specially desired developments (such as scientific inventions and public education). A régime which is basically capitalistic may advantageously forget at times the old dogma of the inviolability of private property, as well as its vain hope of completely free competition. Confronting each particular issue on its own merits, a government may decide when it is more advantageous to let blind struggles take their course and when it is possible to attempt a planned decision and conscious direction of economic processes toward moral ends.

7. *Workers and Farmers as Unfavored Groups*

There are two classes or groups in the national community—as must, by now, be clear to readers of this book—who share so little in the prevalent prosperity as to seem legitimate objects for special governmental consideration. The question whether urban and rural poverty is caused by personal shiftlessness and failure to take advantage of American opportunities might be argued at some length. But at any rate it exists and no one wants it to continue. A more important question for citizens to ask is whether these groups have actually been given what we call a "fair deal," or whether by governmental discrimination—perhaps wholly unintended and unconscious—the path to prosperity has not been made unduly difficult.

When we look at the matter in this way, it is hard to escape the conclusion that our government has favored those who were already rich and powerful at the expense of those who were poor and weak. If this is so it has made the poor poorer and the rich richer, so reversing the process which would lead to the greatest social welfare. Contemplation of this situation and public discussion of it from many different angles has gone on for many years, and there is, by now, at least a rough formulation of measures which might be taken to correct the disabilities of both workers and farmers, and strengthen their attempts to obtain a share of the national income.

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IF WE COULD ONLY HARNESS IT, WE'D HAVE HAD FARM RELIEF LONG AGO

—Darling in the New York *Herald Tribune*

So far as workers are concerned these proposals take the form of the removal of insecurity and the strengthening of bargaining power. It is suggested that the government might follow the European lead in instituting plans for social insurance, giving protection from the haunting dangers which beset every wage-earning family: unemployment, sickness, and old age. The details of schemes for social insurance can be discovered by studying German, Russian, and English experience.[2] They are in effect in those countries and have had immense benefits. There are other specific measures, also, for which our workers ask, such as fuller recognition of the right to associate and to bargain collectively, the disestablishment of the frequent abuse of injunctions by which a reactionary judiciary may interfere in labor disputes, and better control of working conditions for the protection of health. Government might go a long way in all these directions without catching up with a number of other nations. Even more far-reaching in its effects is the belief of many economists that much of the uncertainty and lack of coördination in the business world which bears down so heavily on the workers as a class, might be corrected by the adoption of a comprehensive national plan for industry and an adequate control of capital distribution and prices to insure its success. Such regularization and control would be highly favorable to workers just as the present lack of it is to speculators and business men generally who profit from the risks and uncertainties inherent in our present arrangements.

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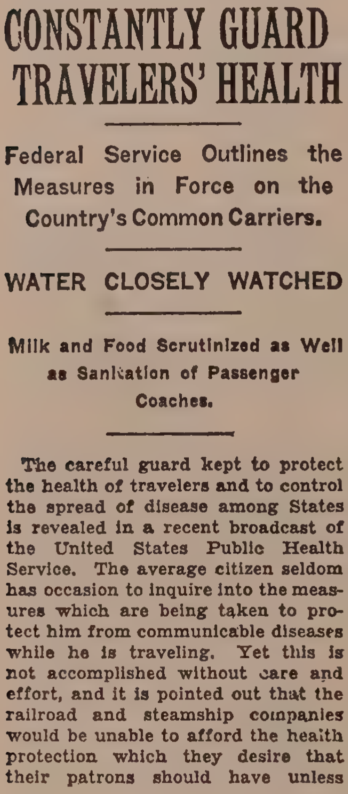
[2] See also our further discussion in another place.



CONSTANTLY GUARD TRAVELERS' HEALTH

Federal Service Outlines the Measures in Force on the Country's Common Carriers.

WATER CLOSELY WATCHED

Milk and Food Scrutinized as Well as Sanitation of Passenger Coaches.

The careful guard kept to protect the health of travelers and to control the spread of disease among States is revealed in a recent broadcast of the United States Public Health Service. The average citizen seldom has occasion to inquire into the measures which are being taken to protect him from communicable diseases while he is traveling. Yet this is not accomplished without care and effort, and it is pointed out that the railroad and steamship companies would be unable to afford the health protection which they desire that their patrons should have unless

(From *N. Y. Times.*)

The farm depression which has persisted since 1920 has given, also, new impetus to proposals for agricultural relief. It has been vigorously contended that farmers are discriminated against in the provision of credits, in taxation, in transportation rates, and by the tariff structure. It has been contended, moreover, that the government ought to set up a central agency to assist in marketing our staple crops, of which there is undoubtedly a persistent surplus which periodically breaks the price so that the farmer's returns are often below his costs of production. The alleged discriminations are matters of legislation and could be removed by changes in law. The setting up of a governmental marketing agency, however, is a different matter and has been the cause of much political controversy in the last decade. It was, of course, the basis of the successive Surplus Control Acts of Congress[3] which were vetoed by President Coolidge. Because of the persistent surplus, it was claimed, which must be exported, American crops have to be sold at European prices; but the prices of goods which farmers must buy are kept up by our protective tariffs. Either remove the tariffs, farm leaders asked, or admit the farmer to the protective system by governmental assistance in marketing. They proposed to set up stabilization funds, furnished by the government, to be loaned to coöperative associations or to insure these associations against loss of profits to their members. The levying of fees against each unit of product to be marketed would be relied on to pay expenses, and the price of farm products would be maintained by segregating and "dumping" abroad the surplus of each crop.[4] The strengthened co-

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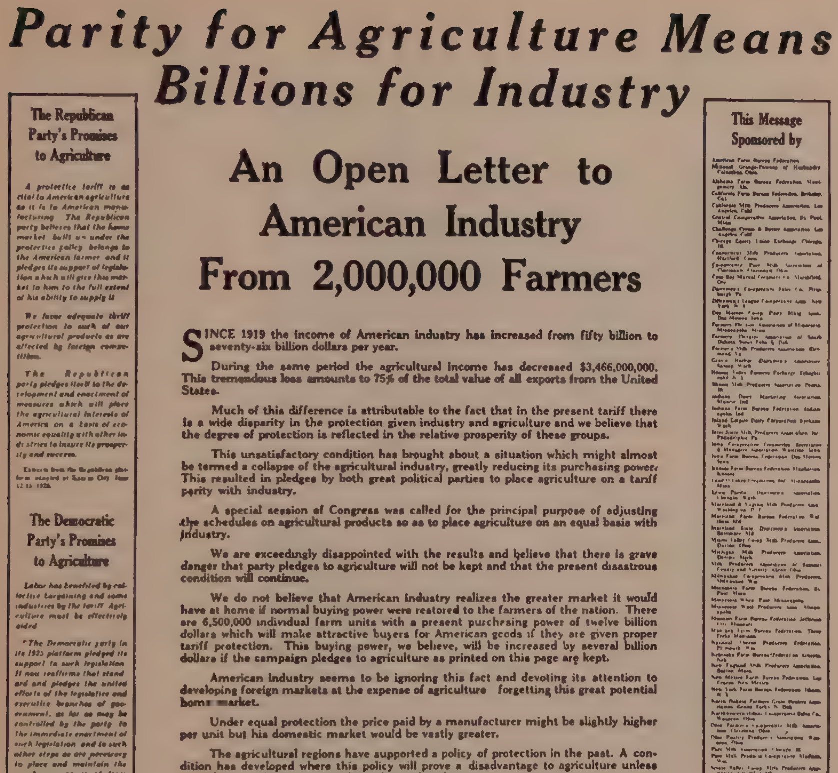
[3] Known as the McNary-Haugen bills.

[4] To "dump" abroad means to sell a surplus there at prices less than those current at home.



Parity for Agriculture Means Billions for Industry

An Open Letter to American Industry From 2,000,000 Farmers

SINCE 1919 the income of American industry has increased from fifty billion to seventy-six billion dollars per year.

During the same period the agricultural income has decreased $3,466,000,000. This tremendous loss amounts to 75% of the total value of all exports from the United States.

Much of this difference is attributable to the fact that in the present tariff there is a wide disparity in the protection given industry and agriculture and we believe that the degree of protection is reflected in the relative prosperity of these groups.

This unsatisfactory condition has brought about a situation which might almost be termed a collapse of the agricultural industry, greatly reducing its purchasing power. This resulted in pledges by both great political parties to place agriculture on a tariff parity with industry.

A special session of Congress was called for the principal purpose of adjusting the schedules on agricultural products so as to place agriculture on an equal basis with industry.

We are exceedingly disappointed with the results and believe that there is grave danger that party pledges to agriculture will not be kept and that the present disastrous condition will continue.

We do not believe that American industry realizes the greater market it would have at home if normal buying power were restored to the farmers of the nation. There are 6,500,000 individual farm units with a present purchasing power of twelve billion dollars which will make attractive buyers for American goods if they are given proper tariff protection. This buying power, we believe, will be increased by several billion dollars if the campaign pledges to agriculture as printed on this page are kept.

American industry seems to be ignoring this fact and devoting its attention to developing foreign markets at the expense of agriculture forgetting this great potential home market.

Under equal protection the price paid by a manufacturer might be slightly higher per unit but his domestic market would be vastly greater.

The agricultural regions have supported a policy of protection in the past. A condition has developed where this policy will prove a disadvantage to agriculture unless agriculture is placed on a tariff equality with industry.

From a standpoint of permanent industrial prosperity and from the standpoint of fairness, we appeal to the industries of America to demand of Congress the passage of a tariff measure which will give the promised equality to agriculture.

United agriculture has presented its case. After careful investigation minimum rates have been proposed which will keep these party pledges. The near future will tell whether agriculture is to get the tariff equality promised (and industry is to secure an additional purchasing power greater than can possibly be secured from foreign markets) or whether the agricultural collapse is to be complete.

In its proposal to the Ways and Means Committee of the House and the Finance Committee of the Senate united agriculture [representing directly over 2,500,000 farmers] has asked for tariff rates which "will give this market to him to the full extent of his ability to supply it." These rates, on which organized farmers in the East, West, North and South are agreed, are now before Congress. They should be granted without delay.

Agriculture is convinced its cause is just. The responsibility is now in the hands of industry; hence this appeal.

Let us remain "one nation, indivisible, with liberty and justice for all."

The Republican Party's Promises to Agriculture

A protective tariff is as vital to American agriculture as it is to American manufacturing. The Republican party believes that the home market built up under the protective policy belongs to the American farmer and it pledges its support of legislation which will give this market to him to the full extent of his ability to supply it.

We favor adequate tariff protection to such of our agricultural products as are affected by foreign competition.

The Republican party pledges itself to the development and enactment of measures which will place the agricultural interests of America on a basis of economic equality with other industries to insure its prosperity and success.

Excerpts from the Republican platform adopted at Kansas City June 12-15, 1928.

The Democratic Party's Promises to Agriculture

Labor has benefited by collective bargaining and some industries by the tariff. Agriculture must be effectively aided.

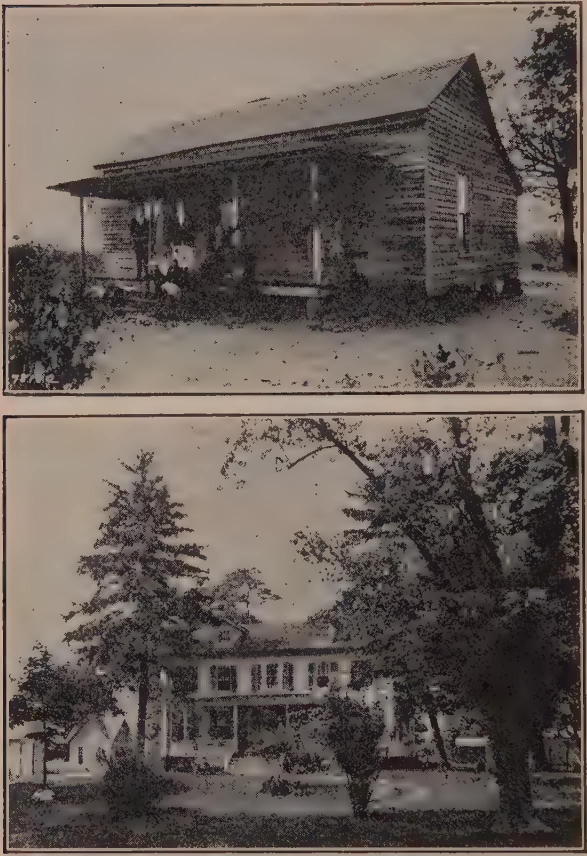
"The Democratic party in its 1925 platform pledged its support to such legislation. It now reaffirms that standard and pledges the united efforts of the legislative and executive branches of government, as far as may be controlled by the party, to the immediate enactment of such legislation, and to such other steps as are necessary to place and maintain the purchasing power of farm products and the complete economic equality of agriculture.

Extracts from the Democratic platform adopted at Houston, Texas, June 26-29, 1928.

THIS MESSAGE SPONSORED BY (cont.)

This Message Sponsored by

The farmers remind the politicians of their pre-election promises by way of a full-page advertisement in the New York Times. Farmers have for a long time felt that they suffered from discriminations of four sorts: tariffs which favored manufacturers at their expense, unduly high freight rates, unequal taxation, and difficult access to credit resources. It is partly by attack on each of these separately that some measure of relief is sought to be achieved. A decade of unusually severe depression, accompanied by wide discussion has clarified the situation so that the issues are sharper. We are entering on a period when a diversified program of legislation affecting agriculture is likely to emerge. It seems clear that something will be done; whether what is done will prove sufficient to reconstruct this backward industry and provide the kinds of assistance farm leaders would like remains to be seen. The student can follow developments with a better chance for understanding if he first attempts an analysis of the contemporary economic situation in which agriculture must function along with other industries. (Advertisement in *N. Y. Times*, December 16, 1929.)



These two homes and family groups illustrate better than words can, just what it means to live below or above the poverty line. The family in the upper picture has an income of "less than $1200 per year"; the lower picture shows the home of a family at "more than $1500 per year." The strength of the agitation for "farm relief" has its source in just such easily discovered contrasts as this.

operatives could then store enough produce for the domestic market until a fair price could be obtained.

It was objected that the scheme is unconstitutional because it was poorly concealed price fixing and that it would defeat itself by success, since if the price were raised, more would be produced, and so the surpluses would increase year by year and swamp the machinery with goods to be marketed abroad. Also it obviously depended upon a coöperative organization which did not exist but which was necessary to its success. These objections, part real and part fancied, served to defeat the final passage of all proposed surplus-control legislation.[5]

Mr. Hoover's election to the Presidency and the calling together of the new Congress resulted in one form of "relief" though not of the sort for which farm organizations had contended. We have already discussed certain of its features in the chapter devoted to agricultural finance. A Farm Board was set up by an Act of 1929 with certain duties in administering a $500,000,000 loan fund, to be used at their discretion as advances to coöperatives. Not much in the way of correcting the disadvantages of farmers is expected from this gesture; but experience has as yet been too short to be able to conclude anything definite. If this legislation does assist farmers materially, they will find themselves in a better position, so far as governmental support goes, than the urban workers. But no one who knows anything of the facts concerning the living and working conditions of either of these two submerged groups, and whose social conscience is developed beyond the most rudimentary stage, will be content until there has been a rather complete change in the tenor of our whole governmental attitude toward industry and those who are engaged in it. Our political democracy offers a startling contrast to the autocracy in industry; and it seems unthinkable that the two can exist permanently, side by side and presumably functioning together, in the same social system. Our governmental agencies have acted during the last decade as though their theory were frankly plutocratic. They have done everything to strengthen and protect those who are already strong and well protected, and have done very little to guard from still greater injury and degradation those groups who already torment us with our past neglect. This situation, a democracy, with pretensions to some ideals of justice, must remedy. And the time for action is already far past due.

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[5] For further discussion of "farm relief" the student is referred to "Some Reflections on Farm Relief," by R. G. Tugwell in *The Political Science Quarterly*, xliii, 481 ff. (December, 1928) and to the first extended historical treatment of the past decade of agitation: *Agricultural Reform in the United States*, by John D. Black (McGraw-Hill, 1929). He might also consult the March, 1929, volume of the *Annals of the American Academy of Political and Social Science* which was entirely devoted to farm relief.

PART IV

RAISING THE LEVELS OF LIVING BY THE REFLECTIVE USE OF INCOME

CHAPTER 31

THE NEED OF REFLECTION IN THE USE OF INCOME

The biblical aphorism might be used for our purpose here: "What shall it profit a man if he shall gain the whole world, and lose his own soul?" What, indeed, is the wisdom in attaining command over purchasing power if it be used foolishly? We need not look far for examples of the foolish use of income; unfortunately they are all too numerous. There are the vulgar extravagances of the rich, of course, but there are also the departures of all of us from the common-sense rules we profess to live by, not so conspicuous as the wasting of the leisure classes, but no less important on the whole. For often the way income is used makes the difference for a family between poverty and comfort. And also, if we stop to consider, we can understand that every unwise use not only affects the individual and his family group, but has its reactions on all the rest of us who live in the community. This is because the community needs wise and healthy members; but also because spending directs the efforts of producers, and determines, for example, whether much or little effort shall go to making "illth," as Ruskin calls it, or whether it shall go to making wealth. So it happens often that with a rise of money income the general welfare is not improved, because those through whose hands it passes choose to lose their souls in the many toils of temptation there are in the modern world. It is only by becoming wise choosers, wise spenders, and wise users that the vast potentialities of our increased productivity can be transformed into the realities of human progress.

It would have been too much to expect, we can see now, that people's choices in the modern world should always have been taken wisely, for, as a matter of fact, the problem of choosing is a very recent one in the history of the world—that is to say, a recent one for the mass of people; and not even yet have we had time enough to build up a code of customary wisdom concerning it. In medieval times even, to go no further back, the alternatives of choice were extremely limited. If we should take the common things of life and investigate their varieties we should be astonished, from our modern point of view, at the comparative rigidity with which the medieval workman was held to certain kinds of food, of drink, of clothing, of furnishings for his house, of medicines for the cure of sickness, of toys for his children, of amusements for his scant leisure, of ways of taking a journey.

The productiveness of the economic system of the time was so limited that there were but few things in the world to choose from, and then, too, money had not become the universal medium of exchange it now has. Workmen were paid "in kind" and depended on barter to obtain other things than those they so received. But when the habit arose of paying workmen in money, they became free to use this money to choose what goods they wished. And the custom of money payment was a part of that revolution in industry which so increased the amounts of goods in the world and the varieties of them that the freedom of choice became much richer just because of the goods there were to choose among. But people were not made any wiser—unfortunately—to meet the growing need for wisdom. Once it was hard to be foolish in choosing: now it is easy. And for the prohibitory limits which surrounded the medieval workmen we have only such moral limits as we are now beginning to build up for the restraint of waste and display and for the encouragement of simple tastes and rational living.

Mail-order houses, in alliance with the rural free mail delivery, have supplanted the old peddler. It is not hard to understand why. Contrast the 46,000 Sears, Roebuck choices with the hundred or so available on the peddler's wagon. (From *Harper's Weekly*, June 20, 1868. Used by permission.)

It is for this reason that such very great contrasts may be found in the ways of life among families who have the same incomes. One family will run to overindulgence in amusement, to conspicuous adornment and to a general shiftlessness about the home which shows itself in poor housekeeping, untidy premises and, very likely, an unwise diet and conspicuous rather than useful clothing; and another will dress plainly, eat with a view to health rather than momentary gustatory pleasure, and will keep its premises neat and its house spotless. And it may well be that the better family of the two—and can there be any doubt which of the two *is* the better family for the community?—has even less money income than the worse one. They use it wisely, that is all. The spendthrifts of society are often engaging persons with social charm, perhaps, and are altogether likable, but they charge a heavy price for their fine manners, a price sober citizens are reluctant to pay; and besides there never has been demonstrated to be any causal relationship between charm and ne'er-do-wellness; the ne'er-do-wells trade more upon it, it is true, and so are more notorious, but their wasting of the world's precious goods, with their decorative qualities as excuse, would not be tolerated in a really advanced society. There are ways of life, less attractive superficially, and which make more demands upon the sterner depths of character, but which contain rewards of a richness unguessed at by the wasters of the world. Virtue is not its own only reward; the rewards are various and lasting for the seekers after modern goodness. And not least of them is the sense of doing the right thing by one's fellows.

America's most widely read book offers more than 46,000 choices—a few pages from the 1929 Sears, Roebuck & Co. catalogue. The drug department alone of Macy's store offers some 20,000. The number in the whole store has never been added up. Here are surely alternatives in plenty; yet how many people are heard to say of these: "I can't find what I want there!" (Sheets from *Sears, Roebuck Catalogue*, 1928. Used by permission.)

This is all very well as a general guide to conduct in the uses of income. It is when the specific judgments have to be made that difficulties arise. And they are real difficulties. For there are not—and there cannot be—any scientifically arrived-at rules for the choosing and using of goods. What is the most wasteful extravagance in one family may be the most careful wisdom in another. Consider, for instance, family A: they are all musical, with children of promise in the profession of the art. A piano for this family would be said to be plainly a sensible purchase. But consider family B: in this family two daughters think themselves musical—how usual is this case!—but in reality they are only "thumpers" and there is not the slightest chance that they will become finished artists. However, they "like to play." Question: is a piano extravagant for family B and not for family A?

It will be seen that a thousand illustrations might be used concerning choices of food, of clothing—of whatever; in which no rule can be laid down and in which no judgment can be trusted but that of the individual or the family concerned. It is right, therefore, that society should, on the whole, demand wisdom of individuals, but not enforce certain definitions of it. A general prohibition against the eating of lobsters, the using of perfumes, the reading of novels, the playing of violins, the wearing of silk hosiery, the sleeping on hair mattresses, or living in overheated houses might be good in some cases but might very well in many other cases work considerable hardships. The enforcers of the prohibition would certainly make themselves ridiculous, but no other result could be guaranteed. On the whole such prohibitions would seem to most of us childish. We think a person ought to know which uses are wasteful and which are wise and are willing to allow a considerable latitude for "idiosyncrasy," another word for a well-known biological distinction, "individual difference." This admittedly leaves much choosing to the realm of morals, but that is where it belongs; and neither economists nor any others are entitled to make rules in this realm.

There are, however, certain common-sense canons of choice which can be made clear so that wide divisions of judgment may be seen to be right on one side and wrong on the other and we shall try to make these distinct as we go along. First, though, we ought to expend some effort in the attempt to analyze the choosing, spending, and using activities of individuals and groups, for the purpose—if nothing more—of getting a firmer grip on what may be expected of people in the way of reflective choice and what mechanisms there are for pointing them out and persuading toward them. In the process of doing this it ought to become clear that *to make choice more reflective is to make it as good as we can* and that society owes its perplexed individuals some guidance in the way of a reconstructed ethics of choice. Our canons will be found in specific discussions of the ways in which choices may be improved—and so the levels of living raised.

CHAPTER 32

INDIVIDUAL CHOICES: HOW THEY ARE MADE

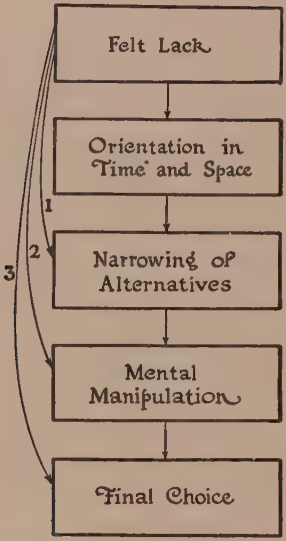
1. *How They Are Made*

When an individual chooses something, he does it because there is a felt lack, because there is something missing in the individual economy. This felt lack, however, has very complex origins. There are an external and an internal environment to be considered; and from either or both of these the stimulus impelling to *some kind* of choice may come. The body feels hunger, pain, repression, joy, or some other emotion primarily a function of the bodily system induced by the internal workings of the various mechanisms with which man is fitted out. Changes in these mechanisms go on continually and the mechanisms themselves vary greatly among different persons. Changes here furnish the internal environment. This body, however, is situated in an external environment which also varies greatly at different times and places and brings the physical mechanism of the body into contact with a correspondingly great variety of external stimuli. It is one of the wonderful and, as yet, very mysterious, arrangements of life that human nature is able to make some kind of adjustment between these two environments. It is the felt lacks of which we just spoke, which give notice to the mind of any disturbance of adjustment. Human nature refuses to be satisfied with anything less than perfection here and so is continually impelled to supply the bodily economy with the goods which possess the power to satisfy. Choice is made among the alternatives which happen to present themselves at the time and at the place they are required.

It will be seen, then, that choice, which is so very important to economists, has its roots, on the one hand, in the depths of human nature, and, on the other hand, in the complexities of the world in which that human nature is set and upon the conditions of which it must act.

Choices become, for the individual, somewhat stereotyped; fortunately so, for none of us could find the time or the energy to think through every act of choice we are forced to make. Habit is a short cut which enables us to escape reflection and decision. It carries its own dangers, of course, because habitual choices often fail to achieve perfect adjustment. This is because minute and unnoticed changes in the external or the internal environment may have occurred since the completion of the act of choice which created the pattern. But habit is, nevertheless, in spite of this defect, on the whole a fortunate fact. And then, too, its patterns are always susceptible, with some effort, of being broken up and reformed.

The first step in the individual's act of choice is the feeling of a lack. It may be a lack of food which comes purely from internal environment. We call this hunger. But—and here we may find an interesting illustration of the relation between the internal and external environments—it may become a well defined hunger for a certain kind of food, the definiteness of the want being fixed by the suggestion of an advertisement, say, which is part of the external environment. It may be a lack of what is considered proper apparel; and here too there is an interesting mixture of internal and external stimuli, the feeling of cold or exposure, or the anticipation of it, being combined with the complex impulse to personal adornment modified by the social codes governing it. Or it may be the lack of health evidenced by pain, the lack of that variety of occupation to which the race became accustomed through long eras of primitive struggle, the lack of a home-place, the lack of amusement, the lack of anything, in fact, which makes life seem whole and complete. And the extensibility of these lacks is a feature of them. There is literally no limit to their number, no end to the effort it would take to fill them all—which suggests one sufficient reason at least why mankind is never likely to be able to stop working even if it should ever desire to do so.



The steps in choosing: a highly generalized graphic representation of a mental process.

The step which immediately follows the felt lack is the casting about which the individual does for the general means of relief. And here reflection enters the process, defining for the individual the elements of his problem and its orientation in time and space and among the social institutions which must form the background of the solution. This is a necessary step because of the indefinite nature of lacks in the first place and because, in the second place, of the various general ways in which they may be supplied. Consider, for instance, the very elementary and simple one which we call hunger. Even this impulse, if it is to find satisfaction, must be rather carefully directed. Do we want a full meal or a light one: will a sandwich and a glass of milk do? Is it morning hunger, or night hunger with its different bodily demands? In what general place—if there are alternatives—shall we seek it? Shall we spend much or little on it? All these and many more are elements of the deliberation. They reveal the possibilities of relief and they settle some of the larger problems involved; for instance, the fixed conditions are recognized. We cannot spend more than a dollar; it is luncheon and the meal must be a light one; we must not load the meal with proteins, because we are doing sedentary work—and so on. These are eliminated and as they are settled one by one, choice narrows more and more.

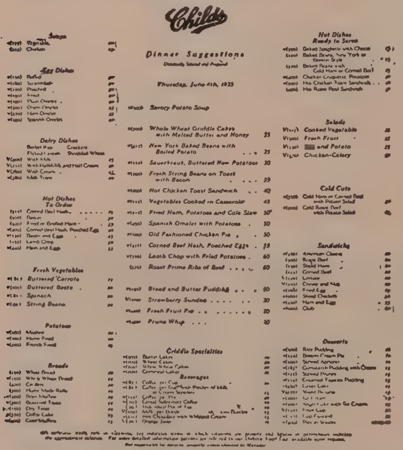
It may be, though, that this whole process is escaped—and for economy of effort the mind will escape it unless forced by some disturbance (some secondary feeling of lack) to recognize the need of conscious study. For it may be that it has all been done on some previous occasion. The customary lunch time comes, we go to some regularly frequented place and eat a meal like, in all respects, those we eat every day. Habit has made a short cut to choice. We may be thinking of other things—conversing even—all the time. Or, again it may be, the place hasn't to be determined but the food to be eaten has; or the food—say a bowl of milk and bread—is a regular feature but the place must be chosen.

Choice, it will be seen, is extremely complex when hunger besets the modern individual. He has efforts of reflection to make which were necessary to very few of his ancestors, who had only black bread and greasy soup available in any case, and who need not therefore bother their heads about choosing. And if this is true of so simple a need as hunger, how much more true it is of the more highly complicated needs of amusement, of creative work, of adornment, and the like! But we see that this second step in choice has two definite elements, the reflection which defines and suggests and the habit which moves over a regular pattern straight to customary choices. If this second element were universal there would be no need to analyze further steps in choice; habit would cut them out. But we have seen that the conditions set for choice change, and that new external and internal factors creep in and make new acts of reflection necessary. It is worth noting, however, just here, that what is now habitual and performed without conscious effort, was once reflected upon. Habits are the results of old reflections and all choices are therefore the result of conscious arrangement, performed either in the present or at some past time. Most acts of choice are conglomerates; partly made up of new reflections, partly infused with old ones. This necessarily makes the analysis complicated; but perhaps if we concentrate upon the reflective part of the total act of

Choosing.

choice, remembering only incidentally the part which habit plays, we shall come eventually to a better understanding of the whole process.

The next step, then, is toward a narrowing of alternatives with some casting about for specific goods to meet the general conditions determined upon. The meal must be light; well, there are many menus falling within both the area of possibility and the area of awareness of the individual. Here specific external suggestions such as advertisements or the advice of friends play a large part, making concrete proposals to the mind. These are sorted over, some are easily eliminated as not meeting the conditions, some survive for the next step in choice.



Childs

Dinner Suggestions

Thursday, June 4th, 1935

Savory Potato Soup

Whole Wheat Griddle Cakes with Melted Butter and Honey 25
New York Baked Beans with Boiled Potato 25
Sauerkraut, Buttered New Potatoes 30
Fresh String Beans on Toast with Bacon 35
Hot Chicken Toast Sandwich 40
Vegetables Cooked in Casserole 45
Fried Ham, Potatoes and Cole Slaw 50
Spanish Omelet with Potatoes 50
Old Fashioned Chicken Pie 50
Corned Beef Hash, Poached Eggs 55
Lamb Chop with Fried Potatoes 60
Roast Prime Ribs of Beef 60

Bread and Butter Pudding 20
Strawberry Sundae 20
Fresh Fruit Pie 20
Prune Whip 20

Soups

Egg Dishes

Dairy Dishes

Hot Dishes To Order

Fresh Vegetables
Buttered Carrots
Buttered Beets
Spinach
String Beans

Potatoes

Breads

Griddle Specialties

Beverages

Hot Dishes Ready to Serve

Salads
Cooked Vegetable
Fresh Fruit
Chicken-Celery

Cold Cuts

Sandwiches

Desserts

The range of choices for food in the typical American restaurant makes it possible either to be wiser in diet than our ancestors were or to be very much less wise. (Courtesy Childs Restaurant.)

There is no need to repeat, in any detail, that habit may enter here again, and may short-cut the choosing process. Some specific good may appear upon the horizon of awareness and may find so complete a habitual recognition that reflection simply need be carried no further. For instance, vegetable salad appears upon the menu. It has been eaten on similar occasions with great satisfaction and with no distressing results. It complies with all the general tests; it makes a light meal, it contains vitamins, a large proportion of nonprotein food and much roughage. All this is perfectly clear and familiar. The shutter is clicked; the picture taken. There is no need to go further.

But where this does not happen there is a fourth step: mental manipulation, an imaginary trying-out process which forecasts the possible actual results of the good under prominent consideration with, very likely, a comparison of it with other eligible goods. The details of this process are too familiar to need description. They vary, of course, with the individual who is choosing, with the importance to the individual of the choice being made, and with the richness of the alternatives offered. The girl who hesitates between two equally desirable lovers is a favorite character in fiction; it may be partly because she typifies the almost constant state of the human mind hesitating over the choices it must make. Shall dinner—to keep the simple illustration of food—once the decision has been made that it shall contain meat, center around roast beef or lamb, a steak, a chop—or corned beef, say? The menu offers all of them. Perhaps here again an instantaneous habitual reaction cuts off the necessity for choice. In some minds, "dinner," "roast," and "beef" may set up inescapable connections which make choice inevitable. But suppose all of the menu's alternatives appear desirable: what an interminable series of possibilities opens up! One might linger indefinitely after soup and before meat and never really settle the problem if there were not the urge of emptiness. Perhaps it will be enough to say of this that it results finally in a settling upon one good of them all which fulfills the general and specific conditions set, which promises adjustment and no regrets—or ones, at least, which are subsidiary to the satisfactions to be gained.

There comes then the final act of choice, which is, again, merely the further comparison of the prospective good tentatively settled upon with all possible alternatives and the rejection of them in his favor. If one of the others should, at this stage, appear as a formidable rival, it is not too late to retreat, but it is rather difficult, for retreat would involve the weighing of the positive attributes of the new good and its possible defects as an ultimate satisfier. But this is going back only one stage, not three or four, and by no means involves a repetition of the whole choice-process. At any rate the final act of choice is the rejection of all alternatives and the adoption of a single source of fulfillment.

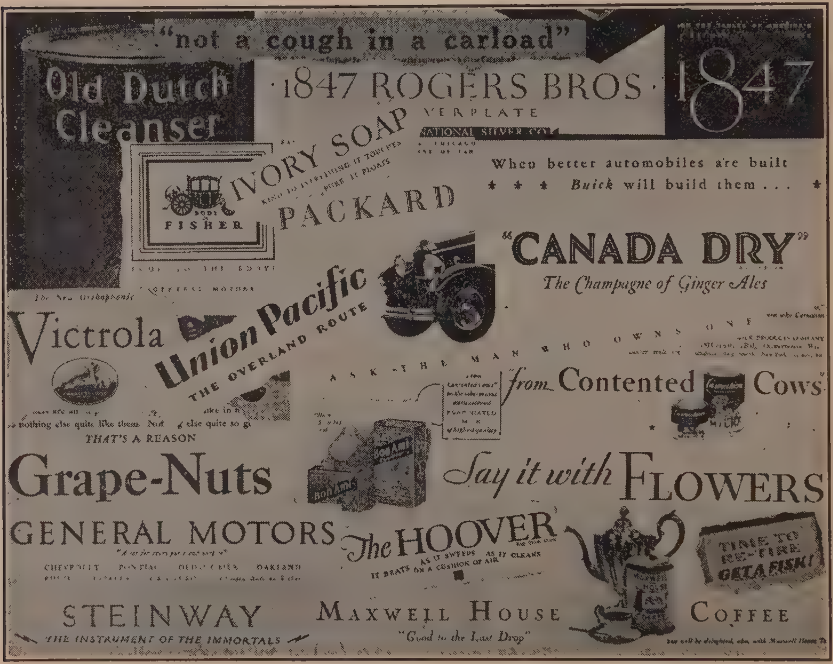
2. *Their Reflective or Unreflective Nature*

The act of choosing has behind it the necessitous urge toward adjustment, a blind urge which calls for action but fails to specify the exact action required. This specification is performed by the reason with, as we have said, a preview of the consequences to be expected and a weighing of alternatives. This preview of consequences, or imaginative survey of a future in which the projected choice has been completed and has become a part of the individual economy, varies according to the powers and the experiences of the mind which makes it. Obviously it may be accomplished with varying success. But, also obviously, the degree of success with which it is accomplished depends upon the quality of the reflection with which it may have been done.

The "old-fashioned stock for which he had contracted a fondness in his youth."

What would be the situation of a person whose choices, once made, became thereupon fixed habits, not subject to revision from that time? There would perhaps come a time in a world which changes as rapidly as the modern world does, when his choosing would have to cease because all the specific things for which he had formed habits had disappeared from general use. The old gentleman who was seen recently in a haberdashery store trying to buy an old-fashioned stock for which he had contracted a fondness in his youth illustrates this. Reason had lost its power to revise this habit and one pictures the old gentleman wandering from shop to shop in a vain quest for a vanished good. But we are all like that—more or less.

When a choice has been made, and successfully made—that is to say, after events fully substantiate the anticipated relief of the act of choosing—then the habit fixes itself. A habit pattern is formed which tends to make unnecessary thereafter the raising of that particular choice to the conscious level. The impulse has been successfully objectified, it has found an object on which it can act with a maximum of good and a minimum of regrettable consequence. Thereafter its outlet is along a path established by this first favorable choice. The old gentleman of our illustration had such an experience. He chose a stock once, with all the care and hesitation characteristic of youth in the matter of adornment. It filled the want so precisely and gave such great and continuing satisfaction that it never again was forced into the area of conscious revision. Such a habit may, with the passage of time, and especially if the emotions surrounding the choice were very intense, become fixed to the point of obsession and pass quite out of the control of reason.



The slogan, often repeated, is familiar and subtle device of which advertisers make the fullest use. By it they hope to persuade consumers not only to buy once but many times in habitual fashion.

The tendency, indeed, of all habits is in this direction. And it is easy to understand why: simply for the sake of economy. Once the mind has performed the function of choice it is a tremendous economy to be able to escape making that particular effort again. The reason is thus freed for other work. Carried to an extreme, we see this illustrated in the person who has completely routinized the small decisions of life. He does the same things, uses the same goods, day after day according to a completely customary pattern. But such persons are often the ones who use their reasoning powers for the very highest purposes. A scientist, a philosopher, an artist, a great administrator, simply cannot afford to have to decide each day what he shall eat and wear, and what he shall do for exercise or amusement.

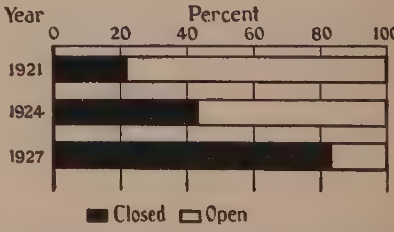
This is the favorable aspect of this arrangement for economy. The less favorable one has been hinted at already. It is not a very serious social matter than an old gentleman should go about hunting for a vanished stock; but it might well be a very serious matter if many people's habits should become unchangeable. Suppose, for instance, that the habit of eating large quantities of meat and drinking much liquor, which belonged to an age of heavy manual labor and outdoor living, persisted in the present. We should all die of it eventually. Or suppose the fixed habits of an older generation in the matter of clothing had not been revised and we had never adopted athletic underwear, or sweaters, or soft collars, or felt hats—to mention a few changes of recent years in men's apparel.

One large factor in the long recent depression of the textile industry was the discarding of superabundant clothes by women. Also the Parisian style-making establishments suffered from the apparent determination of women to standardize on sport clothes and short skirts. In the Fall of 1929 an impressive attempt was made to change this by huge expenditures on propaganda of all sorts. Women's fashions have always been used as the standard illustration of unreflective choosing. The cartoonist here hopes apparently that they will stop being led by the nose to adopt styles profitable to clothes-makers but expensive to consumers. (© Life Publishing Co., 1930. Used by permission.)

But changes do occur and occur frequently. And the reason for the adoption of a new mode like the "bobbed" hair of the modern woman, for instance, is that we do possess the power to break up and revise old habit patterns. It is the more easily accomplished, of course, where some emotional attribute can be adduced to reinforce the dictates of reason. The emotional attributes may even be so strong as to cause revision in the reverse direction as when women choose to wear silk stockings for walking on a bitter January day. The whole matter is very complex; but on the whole there must appear to the chooser to be a smoother adjustment to be gained by making the choice that is actually made than lies with any of the rival alternatives which are rejected.

"Suppose that the fixed habits of an older generation in the matter of clothing had not been revised."

Some habits are easily revised; some are revised only with the greatest difficulty. Americans substitute corn for wheat in their diets with extreme reluctance. But they adopted athletic underwear almost overnight. Individuals differ, too. And they differ concerning the ease with which they change different habits. But the progress of society depends in great part upon the willingness of individuals and groups to give up antiquated habits and customs and to adopt new ones. This willingness in turn depends upon individual and group readiness to admit old habits to revisioning. In a rapidly changing material environment such as ours is, this is much more important than it might be in a world which changed but slowly. We invent ceaselessly and, having invented, we possess the power to manufacture in great quantities and so to make the invention of consequence in every life. But we cannot unless people give up the old and adopt the new.



A recent important change in consumption habits is pictured here—the trend toward the use of *closed* automobiles in the United States. (Data from National Automobile Chamber of Commerce.)

There are two points of importance here, then: (1) it is right and economical that the smaller choices of life should become habitual, and (2) it is necessary that there should sometimes be revision of all choice habits. These two appear at first irreconcilable; but society strikes a balance and may improve upon its method. It permits certain individuals to concentrate upon each small matter. They make suggestions to the rest of us for change in that regard. So we achieve safety razors, typewriters, soda crackers, cigarettes, and automobiles. These things are forced upon our attention, and most of us, however busy with other affairs, however attached to old goods, come eventually to admit them to the scrutiny of the mind. We get around finally to making a complete new choice-act in a field where before habit had dominated. When this has been done, there is a period of awkwardness with the safety razor or the typewriter; then a habit pattern forms itself and the whole matter recedes from consciousness. We go on as though we had always used the new good.

CHAPTER 33

INDIVIDUAL CHOICES: WAYS OF IMPROVING THEM

1. *Individual Choices: Ways of Improving Them*

The author of *Human Traits* has described how it is possible to cultivate the learning habit and how important it is that this should be done.[1] Here we have an analogous situation involving cultivation of the same mental flexibility required to guard against closing the mind to new ideas. For it is just as necessary that new goods be admitted to use as it is that fresh ideas be admitted as part of the working equipment of the mind. We move from good to good when it seems necessary. And it is always necessary when a new good, compared with an old one, offers superior advantages for the individual or for society. Perhaps we can formulate a few simple tests by which we may know where a change from the use of one good to the use of another means progress—for we do not want simply change, we want the new good to assist in creating a better environment.

Probably the most difficult and at the same time the most important of these tests is that of asking *whether the good under consideration forms a necessary complement of all the other goods in use.* This test in turn may be simplified by thinking of it in terms of the secondary tests—*variety and harmony.*

Just as a musical symphony is made up of many elements woven together into a complete work of art, at once varied and harmonious, so one's use of the goods of life may be at once varied and harmonious and may be rounded into a perfected whole unlike any of its elements, yet dependent upon each of them for its perfection. Each good, to meet this test, must contribute to a reflective plan, however unlike the others with which it is associated it may be.

This is a many-dimensioned concept. A symphony may have underlying elements themselves built up from unlike basic themes, so that the whole is difficult of understanding, perhaps, at first, but yields a rich reward to the artist and to the initiated hearer, who alone comprehend the difficulties surmounted in the attainment of the masterpiece. So the life of use is built up from the basic elements, themselves not simple, of a wise unity in feeding oneself, of clothing and housing oneself and in choosing among the environment's offerings of other goods. This reflective basis of life is not easy to attain, for it requires a sustained impulse toward betterment. If choice were guided by any single and isolated consideration we should never attain a life of use which could be compared with the intricately designed completeness of the symphonic composition. Only by calling upon the superior gifts and powers of the human mind for the highest contributions of which they are capable can we arrive at anything like it. And because of this the question immediately arises whether there actually exist in the human mind the potentialities of this designed and controlled existence. If we were creatures of instinct, tossed and pulled about by each of these primitive mechanisms in turn, there would confessedly be no basis whatever for hope. But that we have got so much as we have of design, of finish, of complex perfection, in modern life, reveals the existence of some hidden spring of reason which we have as yet learned to tap but clumsily but which we feel we may rely upon as a resource of the future.

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[1] Irwin Edman, *Human Traits and Their Social Significance* (Houghton Mifflin, 1920), p. 37.

We cannot here develop the complete basis in psychology for the reflective control of existence but we may briefly indicate that the key to it is contained in the phrase "effective objectification," which means, as we have already suggested, the *successful* filling of lack; and lack we may define as an unperfected movement in the symphony of life. As the musician goes over and over the composition he has wrought out, altering, adding, taking away, shifting emphasis, changing pace, the masterpiece grows, under his long and patient toil, toward a perfection which reveals itself anew at every stage of the work. He does not aim at some imagined goal, arrive there, and then stop. He is always seeing new goals with infinitudes of inner qualities utterly unguessed at in the beginning. And, literally, his symphony is never done. It could grow under his hands as long as his working powers persisted. This is why musicians complete so few symphonic pieces in a lifetime and why all an individual's symphonies possess distinguishable likenesses. Beethoven is not Brahms, nor is Wagner, Franck. But each is always himself, revealing in all his work an imagined perfection which is never reached.

Unless comparison is utterly futile this illustration gives us a simplified picture of the masterpiece of life. Reflection utilizes all the elements it comprehends; it works them over and over, choosing, suppressing, discarding, fitting, manipulating, testing, searching for new elements; altering the design as new goals appear, shaping life to a changing vision of perfection. And all we need for the attainment of whatever it is we can attain in making masterpieces is the conscious regarding of the life of use as a piece of work to be done, as, in a sense, the supreme art. It is an art that requires much of the artist; but what we ask from our existence here upon earth is, fundamentally, a trial of our powers. And here is that trial. We are judged by our fellow craftsmen in life and we respond to their dispraise or their applause. But the symphony upon which we are at work is, after all, so much better known to us than to any other human being, however intimate, that we take the judgments of others at their best with a large grain of salt and our real striving is to satisfy an inner standard of our own.

Somehow, though, men are driven to escape conceiving life in this way. There is much more psychic comfort in the varieties of fatalism and mysticism. This is partly because so many of us feel the handicaps too great to make any striving worthwhile; and partly because of the deep sense we have of failure. We manage to escape both of these by postulating deities who control our lives minutely and who ultimately recompense us for the handicaps of life by the rewards of eternal blessedness. In no area of life is this more true than in that of the use of goods. And it accounts, at least in part, for the carelessness with which we arrange the patterns of that life. We turn away from the difficult art; we fall into a meaningless jumble of casual atrocities which do not satisfy, but only irritate, in an already confused existence.

A part of this easily awakened sense of failure and hope of mystic rewards beyond life, again, is due to the long ages man passed through in which he was actually face to face, most of the time, with starvation. This has been called the "age of deficit" and the present, in contrast, an "age of surplus." And truly, in the face of continual deprivation, of being held down to the barest sustaining diet and shelter, man could scarcely be expected to have come to the conceiving of life as an artistic adventure in which he might triumph by fashioning his consuming activities into a superlative design. The notion would quite properly have appeared to him fantastic. And long ages of grinding poverty inculcated the very fiber of society with a morality of abstinence and self-flagellation. These are the typical virtues of economic deficit. But in an age of surplus they reveal their insufficiency in a thousand ways. It is not the anchorite, but the chemical engineer, the executive genius, the scientist—and the symphonic consumer—great producers and artistic consumers—who are needed for the new age. And we need such a revaluation of life's codes of conduct as will make this clear. For the old, dead concepts linger on in a world which has outgrown them.[2]

"An Age of Surplus." (Courtesy Board of Commissioners—Port of New Orleans.)

The impulses to conservation are overexercised to the detriment of the impulses to creation. We are apt to conceive of consumption as a kind of final act, a using up of something gained by human effort. And we are consequently apt to think also that the person who performs fewest of these final mystic rites of use which are a loss to the world, is the best person in it. Frugality is dignified out of all proportion. A more useful conception is the biological one which regards consuming activities as the recreators of energy and justified to the extent to which they succeed in recreating it. Saving or frugality which sacrifices human energy is curiously shortsighted; for it is from human energy alone that we obtain the goods for consumption. Restriction of it limits production. Thrift, not extravagance, is the great enemy of the race, though extravagance, too, in its way, is waste.

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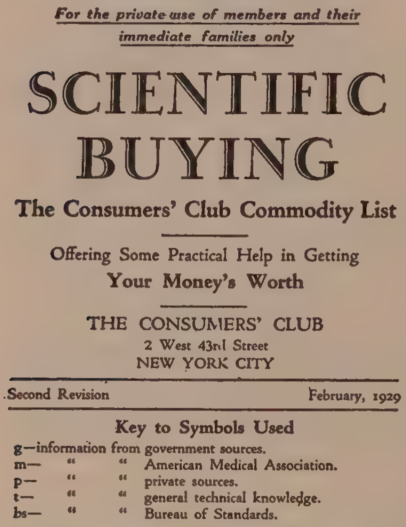
[2] Cf. also the final chapter of this book.

The outward show of material reserves is always impressive when seen in such perspective. "Surplus" is more accurately defined as the increased power to augment the sources of well-being, which includes much not seen with any eyes. Nevertheless the equipment of warehoused goods, stores of raw and finished metals, wools, cottons and other things remind us daily of secret springs of strength which must be kept running free and full. (A Margaret Bourke-White Photo.)

The masterpiece of consumption is something to be labored over and brought to perfection; it furnishes its own energies for the effort; it yields its own rewards for accomplishment. It is not a series of satisfactions to be placed in pigeonholes of wants; but a series of creative challenges to the intelligence and the will.

With this notion of the potentialities and the necessary activities involved in the life of use, we are in a better position to view some of the ordinarily accepted maxims of conduct in the use of goods. We have already seen that blind adherence to an ideal of thrift may lead to degeneration rather than conservation. It is also true that blind adherence to specific choices or to such taboos as distinguish certain social cults may be very dangerous enemies of progress in the arts of consuming. We ought to be free to change; and any limitation on this freedom which originates in prejudice or dogma is a definite hindrance which would better be removed. Specific choices cannot either be demanded or prohibited successfully and they ought not to be. For a good is one which is *good for* some end. It is the end which is important, not the use or avoidance of the good. And when the goal has been made plain and the incentives to it have been furnished, everything possible has been done. If humanity is to progress it must go forward of its own volition. It can be persuaded but it cannot be pushed.



For the private use of members and their immediate families only

SCIENTIFIC
BUYING

The Consumers' Club Commodity List

Offering Some Practical Help in Getting
Your Money's Worth

THE CONSUMERS' CLUB
2 West 43rd Street
NEW YORK CITY

Second Revision February, 1929

Key to Symbols Used

g—information from government sources.
m— " " American Medical Association.
p— " " private sources.
t— " " general technical knowledge.
bs— " " Bureau of Standards.

The Consumers' Club is one practical constructive attack on consumers' problems. It supplies its members with authentic information as to the qualities and prices of a variety of goods. Anyone can join by communicating with the New York office. (Used by permission.)

An individual can achieve morality in consumption not by adhering to any strict régime, fixed once for all, which permits certain choices and prohibits certain others, but only by freeing himself for the use of all the instruments of a perfectly constructed life and by the anxious and prayerful creation of it after a pattern dictated by his reason.

Certain devices facilitate the accomplishment of this. One of them is the budget. Budgets are familiar enough to need no description here. They are the necessary paper-work of existence. We all of us make use of them; but most of us not enough to accomplish the full result. Used carefully, the budget can raise the limitations, the goals to be reached, and the instruments available into simultaneous view, and so can enable a highly rational scheme to be built up for the control of consuming activities. It need not have any special form; it would not contain the same items for different individuals. Its special advantage lies in its ability to make a scheme conscious and to relate each item in it inescapably to all its other items. Without a flexible budgetary device it is impossible for the individual to make a masterpiece of his consumption.

The modern individual, however, no matter how hard he may try to make his choosing complete, varied, and harmonious, is dependent to some considerable extent upon the group of which he is a part and upon society as a whole. From this group he must have some social approvals for his really good choices, no matter how independent he may be. The satisfying of one's own standard is the ultimate test but we are all weak on the gregarious side. We want those for whom we have love or respect to approve our choices. From society as a whole one gets, among other things, the suggestions he must have of the goods available. This last is a particularly serious problem in our civilization. We have numerous goods from which to choose, it is true, but no disinterested or trustworthy means of having them called to the attention. Almost the only means, indeed, aside from word-of-mouth suggestion is commercial advertising. And commercial advertisers are interested rather to dispose of quantities of goods than to assist the individual in the perfection of his own life.

These social dependencies of the individual are very apt to be hindrances rather than helps, for if advertisers tempt the unwary indiscriminately, we are often led by our best impulses directly to unwisdom. For the modern family—or other social group—is only too apt to place a false emphasis upon quantities of possessions, upon the display of riches and not to understand the hardly achieved design of a life of considered choice. But if these are difficulties, the individual must surmount them. And also he must do his part in the reconstruction of incentives in a society which leads men wrong.

2. *Ways of Improving Individual Expenditures and Uses after the Completion of Choice*

Assuming that the problem of choice has been solved, there remains the actual exchange of the liquid purchasing power possessed by the consumer for the goods he has chosen. This may be done in more or less efficient manner; and the single individual is many times at a considerable disadvantage here on account of the superior market strength of those from whom he must buy. The readiest remedy is the increase of market strength by the simple expedient of joining with others who also have small expenditures to make: the aggregate will represent a considerable amount. Buying can then be on a larger scale and can be done much more advantageously. The most obvious larger group is the family but, although there are certain gains in this, they are small, and the most efficient group for this purpose is the consumers' coöperative. These associations, so successful abroad, have not greatly prospered in the United States. It may be, however, that we shall turn to them more as time passes and we come to a clearer realization of their possible services to us. For they not only make the individual's spending more efficient, but they also contribute to a desirable social atmosphere of plenty without waste, of solid satisfactions rather than illusory ones—in a word to a much needed morality of consumption.

There is also to be included in any discussion of betterment in the use of income the problem of the actual using of the goods that have been chosen and bought. We have already discussed this by implication in discussing choice. We mentioned the great need we have to build up standards of use which shall be adapted to modern needs rather than to those of some age already past. But it may not have been made sufficiently clear that these standards had to do with use as well as with choice; and in stressing the falseness of the "thrift" or "abstinence" attitudes toward economic goods, we may have failed to make clear that a morality of generous use and vigorous living does not mean also approval of extravagance. Nothing could be less true; for the vigorous life of creative effort reduces the emphasis upon the use of goods which is so important a feature of abstinence morals. The fact that thrift is praised and abstinence rewarded in an age when obviously the need is for great releases of energy and for the gigantic creative effort to reconstruct the material basis of life, turns men's attentions in the wrong direction; and by a kind of perverse will, they accompany their strenuous production with an equally strenuous consumption which saps their energy rather than restoring it and so prematurely ages them.

SAVINGS *on the* SIZE

Food Purchased	Small Size		Larger Size		Saving on Larger Size
Baking-Powder	4 oz.	$0.18	12 oz.	$0.48	$0.06
Cocoa	⅕ lb.	.10	½ lb.	.20	.05
Crackers	5¼ oz.	.15	12½ oz.	.35	.10
Bacon	8½ oz. jar	.65	16 oz. pkg.	.68	.54
Camembert Cheese	6 Portions	.55	1 piece	.45	.10
Mayonnaise	3½ oz.	.15	1 pt.	.50	.19
Grape Jelly	9 oz.	.30	16 oz.	.40	.13
Strawberry Jam	4 oz.	.18	16 oz.	.45	.27
Evaporated Milk	6 oz.	.06	16 oz.	.12	.04
Olive Oil	4 oz. bottle	.35	1 qt. tin	1.50	1.30
Peanut Butter	4½ oz.	.13	10 oz.	.28	.01
Tomato Soup	8 oz.	.13	2 lb. 10 oz.	.32	.36
Honey	5 oz.	.18	14 oz.	.36	.14
Maraschino Cherries	3 oz.	.12	15 oz.	.45	.15
Orange Marmalade	2½ oz.	.12	16 oz.	.45	.32
Tomato Catchup	8 oz.	.22	14 oz.	.32	.05
Grape Juice	4 oz.	.12	1 qt.	.60	.36
Maple Sirup	½ pt. bottle	.35	1 qt. tin	1.00	.40
Olives	1 pt.	.39	1 qt.	.71	.07
Vanilla	2 oz.	.37	8 oz.	1.30	.18
Tuna Fish	3½ oz.	.24	13 oz.	.70	.19
Vinegar	1 pt.	.22	1 qt.	.33	.11
Flour	3½ lb.	.30	24½ lb.	1.55	.55
Raisins	1½ oz.	.05	15 oz.	.15	.35
Tea	¼ lb.	.30	1 lb.	1.00	.20
Boned Chicken	6 oz.	.48	13 oz.	.96	.08

Total saving of these items when large package was purchased $5.30

Buying on a larger scale than the average family can afford is economical even for ordinary food products. These savings can easily be made by joint purchasing. (Courtesy of Good Housekeeping Institute.)

What we very obviously need is what we somehow lost as industrial society shaped itself; and that is a morality of production. As it is we praise men only for having things and quite neglect to approve their doing things. We cannot here go into the background of all this but the background is clearly that of the shifting of industry from home to factory and of the spreading market areas of the modern economy,[3] the net result being that for his productiveness man gets little praise and a pecuniary reward; but that for his ability to support his family in flashy style, thus prostituting his wife and ruining his children, he gets his only adulation from society. This cannot go on; we not only have to have a recognition for man's creative abilities they do not now receive, and guides to choice which will lead elsewhere than to the silly degeneracies of modern wasting; but we also have to have a morality of "plain living and high thinking," living which restores rather than drains men's energies, and which makes high thinking possible and praiseworthy.

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[3] Cf. R. G. Tugwell, "Experimental Economics" in *The Trend of Economics* (Knopf, 1924), pp. 375 ff.

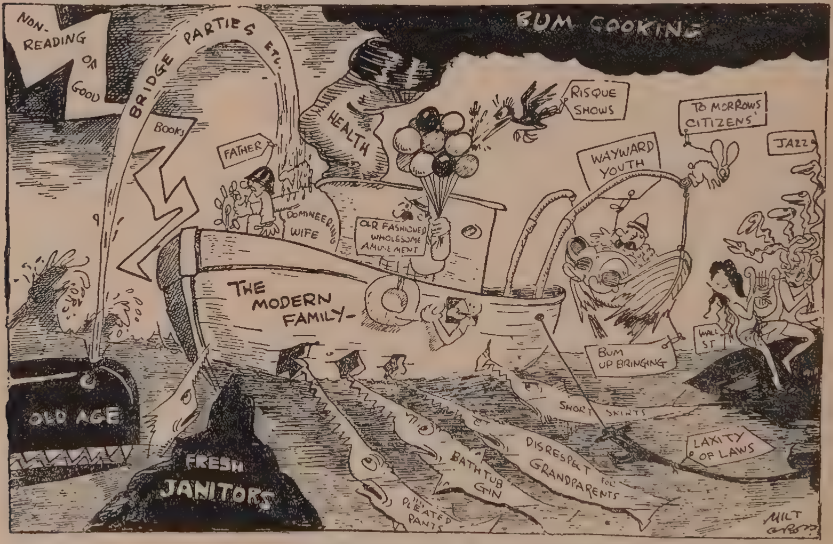
Coming to think of consumption as choice and use, and of symphonic consumption as—next to efficient production—the most socially desirable of all ways of life, may help us to arrive there. Making ends visible and removing them from the emotional to the rational field always marks a gain, because it makes life conscious and therefore less likely to be jumbled. Perhaps education in consumption may assist our civilization as it makes this tempestuous transitional passage, which we are in the midst of, from medievalism in which we linger, to industrialism, toward which we are thrust.

CHAPTER 34

GROUP CHOICES AND USES OF INCOME

1. *Family Uses: How Family Choices Are Made*

When we come to any discussion of the collective uses of goods we enter an even more difficult phase of the problem; for, if our knowledge of individual motives and the best means of controlling them is limited, it is much more true that our knowledge of collective psychology is more remarkable for its gaps than for its content. We are on very uncertain ground; ground where most of what can be said must at the outset be admitted to be of the nature of speculation. The attempt to penetrate its mysteries may be valuable for all that, however, especially since any facts that may be happened on are certain to be a genuine addition to knowledge.



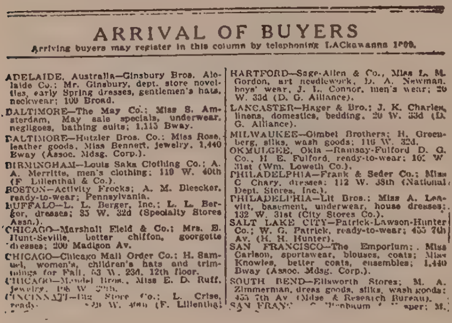
A cartoonist's view of the family's situation in the contemporary world. (From *N. Y. World*, October 27, 1929. Used by permission of the artist.)

One of the grave difficulties is met at the very outset when we attempt an analysis of family choices. This matter would be less difficult if all family choices were made by single individuals for the group. We should then fall back on what we know of individual choices and say that in order to improve the choosing habits of families we need only improve those of its individual members. Social theorists used to view all society in this way—as a simple aggregation of persons the motives and actions of which were to be understood by gaining an understanding of the motives and actions of its individuals. But the facts denied this theory the right to a very long existence. Obviously crowds—even very small crowds—react in ways single individuals never do. And so we know that families—which are small crowds—choose things its single individuals would never choose and, having chosen, use them in ways different from those of solitary users.

The pioneer woman was the partner rather than the competitor of her husband: "The Pioneer Mother" by Mr. B. Baker, American sculptor. (Wide World Photo.)

And not only is this difference between individual and group reactions an element of uncertainty. There are others. There is the fact of the changing composition of family groups; and there is also the shifting industrial basis of family life. There may be others; but these are too important to be ignored, although we can do no more, in our present lack of certain information, than to make acknowledgment and pass on to the somewhat safer ground of individual psychology. Family groups are, and, for a very long time, have been, shrinking in size. As the social need for increased population falls off, and as children become a burden rather than a help, their numbers diminish. Lowered mortality rates also contribute, for, as the death rate decreases, the numbers of children needed to keep up the adult population diminish. This is an important consideration because the relationships between parents and children are very different now from those of any past time and are continually changing. Changing internal relations affect the choices which will be made. We cannot be certain just how these effects are registered. The problem is too new to have been thoroughly explored; but no good purpose could be served by ignoring it. This is true too of the shifting industrial basis of family life, for the obvious usefulness of the family grouping in all primitive societies, only leads us to wonder how long the grouping will persist when the main reason for it has disappeared. In every society before our urban one, the family had a double industrial function—production and consumption. Within our own time production has so far disappeared from family life that only the merest unimportant vestiges of it still remain there. The factory, not the home, is the place where most goods are made now. But the family has an important consuming function still, though even this is quantitatively less important than it heretofore has been. It must be seen, to understand the implications of this change, that woman's function in production has been stolen from her and that she has been left to the petty cares of a diminished institution while her husband does the job that was once her chiefest glory.[1]

We are exaggerating to gain emphasis, but it is very nearly true after all that housewives in cities are changed into competitors rather than partners of their husbands. They used to—still do in rural life—have a well defined place in productive life. Now their interests are reduced to spending the income he earns. That this would be a fruitful source of irritation is clear and every social student knows that this is so. But our chief interest here is to examine the spending activities of the housewife as the chief disbursing agent of the family group to see how fit she is for this most important of her remaining tasks about the home.



ARRIVAL OF BUYERS

Arriving buyers may register in this column by telephoning LACkawanna 1[illegible].

ADELAIDE, Australia—Ginsbury Bros. Adelaide Co.; Mr. Ginsbury, dept. store novelties, early Spring dresses, gentlemen's hats, neckwear; 100 Broad.

BALTIMORE—The May Co.; Miss S. Amsterdam, May sale specials, underwear, negligees, bathing suits; 1,115 Bway.

BALTIMORE—Hutzler Bros. Co.; Miss Rose, leather goods, Miss Bennett, jewelry, 1,440 Bway (Assoc. Mdsg. Corp.).

BIRMINGHAM—Louis Saks Clothing Co.; A. A. Merritte, men's clothing; 110 W. 40th (F. Lilienthal & Co.).

BOSTON—Activity Frocks; A. M. Bleecker, ready-to-wear; Pennsylvania.

BUFFALO—L. L. Berger, Inc.; L. L. Berger, dresses; 35 W. 32d (Specialty Stores Assn.).

CHICAGO—Marshall Field & Co.; Mrs. E. Hunt-Seville, better chiffon, georgette dresses; 200 Madison Av.

CHICAGO—Chicago Mail Order Co.; H. Samuel, women's, children's hats and trimmings for Fall, 63 W. 23d, 12th floor.

CHICAGO—Mandel Bros., Miss E. D. Ruff, jewelry, [illegible] W. [illegible].

CINCINNATI—[illegible] Store Co.; L. Crise, ready-[illegible] W. 40th (F. Lilienthal

HARTFORD—Sage-Allen & Co., Miss L. M. Gordon, art needlework, D. A. Newman, boys' wear, J. L. Connor, men's wear; 20 W. 33d (D. G. Alliance).

LANCASTER—Hager & Bro.; J. K. Charles, linens, domestics, bedding, 20 W. 33d (D. G. Alliance).

MILWAUKEE—Gimbel Brothers; H. Greenberg, silks, wash goods; 116 W. 32d.

OKMULGEE, Okla.—Ramsay-Fulford D. G. Co., H. E. Fulford, ready-to-wear; 10[illegible] W. 31st (Wm. Loweth Co.).

PHILADELPHIA—Frank & Seder Co.; Miss C. Chary, dresses; 112 W. 38th (National Dept. Stores, Inc.).

PHILADELPHIA—Lit Bros.; Miss A. Leavitt, basement, underwear, house dresses; 132 W. 31st (City Stores Co.).

SALT LAKE CITY—Patrick-Lawson-Hunter Co.; W. G. Patrick, ready-to-wear; 455 7th Av. (H. H. Hunter).

SAN FRANCISCO—The Emporium; Miss Carlson, sportswear, blouses, coats; Miss Knowles, better coats, ensembles; 1,440 Bway (Assoc. Mdsg. Corp.).

SOUTH BEND—Ellsworth Stores; M. A. Zimmerman, dress goods, silks, wash goods; 455 7th Av. (Mdse. & Research Bureau).

SAN FRAN[illegible] [illegible] M.

The commercial buyer is usually a person specially fitted for his position by aptitude and training. (From *N. Y. Times*, April 29, 1929.)

The first thing to be said when we begin this line of inquiry is that the job of choosing modern goods and of handling family accounts is a new thing for her, quite outside the tradition of housewifely functions. It takes her into the world of commerce where she is a stranger and throws her into bargaining opposition with the shopkeeper class, experts in the arts of temptation to buy. The fact that it is outside her traditional province, however, may or may not indicate the expectation of bad results. What *would* lead to such an expectation, however, is the obvious present neglect of training future housewives for their task. The future matron in the rural home used to have many valuable years of training in the mysteries of all the household arts and came to the management of her own home so completely prepared to meet the exigencies of its management that her carrying on was practically letter-perfect from the very first. The most casual observation of the usual training of girls and young women at present reveals the shortcomings of our own time. The old tradition has died. There is no new one.

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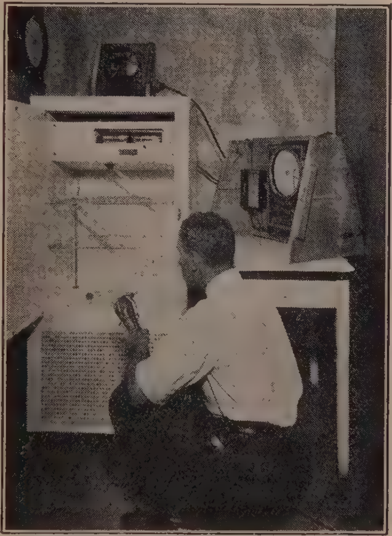
[1] Cf. W. C. Mitchell's illuminating account of housewifely handicaps in "The Backward Art of Spending Money," in the *American Economic Review*, ii, 269–81 (June, 1912).

Girls either receive, in school and college, a poor imitation of their brothers' training or the attempt is made to force them to preserve the forms of the past. They are not taught to look for a new orientation for no one is certain yet what it ought to be. But anyway the modern girl is apt to buy her first roast of beef or her first saucepan *after* she assumes her matronly state, rather than *before*. Because she is all at loose ends until she marries, we call her "flapper." But her flapperism is a *social* failure, not her own. Her unfitness for life and her parasitical hold upon it are the results consequent with almost deadly logic upon the industrial changes which have undermined the whole home institution and which we have utterly failed to foresee and provide for. Statesmen and social prophets of a generation just past carry upon them a heavy responsibility for the blindness which hid from them the developing future. The tragic situation of women is not the least serious result of their folly.



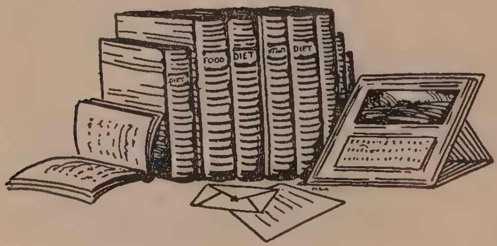
Standards of quality can be tested—even for complex goods. But it cannot be done at home. Some social agencies are necessary. This is the set-up used for testing electric refrigerators at the Good Housekeeping Institute. (Courtesy Good Housekeeping Institute.)

But aside from the whole matter of her lack of training, the housewife is under considerable disadvantage in comparison with any other consumer in the community. This is clearest, perhaps, when we compare her situation with that of the buying officer of an industrial concern. Such a person has, to begin with, an aptitude, usually, and always a training, for his job. Then too he buys in large quantities upon well known standards and with experts to measure the deviation of the goods from the standard. The quantities in which he deals and the commercial position of his firm lend him an importance in the market and an absolute bargaining advantage quite unattainable by the housewife in her small buying operations. It is worth mention also that quantitative standards are to be had in business buying that the housewife cannot fall back upon. The buyer of steel for the making of a machine is guided by definite results. The housewife does not make anything so simple as machines with the goods she buys. She attempts to create family welfare. But this is difficult to measure. Hence the tendency of faulty customs to persist; they cannot easily be proved to be bad and they are harder to rout out, once they are firmly fixed.

Altogether the economic position of the modern housewife is not an enviable one. On the one hand she is denied the kind of work for which she is most obviously fitted; and on the other hand she is forced to perform tasks for which she has no aptitude and very little training. At best she can do no more than register a partial failure. In time the preponderance of the choosing, spending, and using functions will doubtless pass out of her hands; indeed there is a definite trend in that direction. Other individuals in the family assume more and more of the direction of their own consuming activities as family life disintegrates; and this extends not only to the absentee husband but also to the children whose time is largely spent away from the home-place. But what must be said at present is that the housewife is the main disbursing agent for the family and that, aside from efforts to improve the choices of all its members, the chief hope of progress, through better family consumption, lies in the study of the housewifely function and its improvement.

2. *Family Uses: Ways of Improving Family Choices*

One mechanism has been devised in recent years which promises to assist very materially in aiding the housewife to improve family choices: the budget. A family no less than a business firm or a nation can gain by the use of this device, which is, really, only a means to a more comprehensive planning of the life of use. It requires, however, the merging in a family fund of the incomes of all its members and a willingness to be guided by the wisdom of the group. The great difficulties in the way of its usefulness are the very facts of the reduced integrity of family life, the tendency of children to break away from parental supervision, and the spasmodic tyrannies of parents in the effort to check the escape of youth from their domination. Where it can be assumed that family life is real, the budget is possible and helpful.



The housewife must do some studying and paper work to perform her functions well.

This device is the more desirable because it assists in reducing the whole plan of life to quantitative terms and in giving due weights to the various using activities contemplated. It helps also to insist upon the material basis of health and happiness and checks wasteful spending in favor of the acquirement of solid satisfactions. The given quantity in any budget is the expected income. To this must be fitted the expenditures which can be made. First among these will come the utter necessities, food, clothing, and shelter—that is to say, a decision will have to be made concerning the amounts of income which must be set aside for these purposes. And here the assistance of experts is possible. For dietitians have done much work in calculating the necessary elements of an efficient diet, reducing the whole to calories and to chemical content. These calculations of food experts, beginning to be so numerous and so widely circulated in newspapers, magazines, and books, form at least a minimum basis for the food budget. Likewise the shelter item can be reduced to the necessary cubic feet of air space per person, though this is only an irreducible minimum and does not include the definite physical and psychological needs for sun and air.

This leads to the admission which has to be made concerning quantitative measurements: that they can be depended upon only within definite limits in constructing a budget, for the physiologically necessary quantities of goods are not yet certainly enough known to be accurately measured. They do form a useful guide, however, and do look in the direction of better planning and so a better fashioned family life. The family with the budgetary habit has a better chance as a family and greater likelihood of advancing the interests of its individual members.

It is no part of our purpose here to enter into a technical discussion of the construction of family budgets, though the student will find it interesting and instructive to investigate this matter;[2] we are, necessarily, interested rather in the uses of the budget as a social instrument. One of these uses is as a basis for judgment in the revision of customary consuming habits. Families recurrently face this problem because of the various forces of change which continually play upon the group. New members are added to it; others drop out; the income is raised or lowered; the ages—and consequently the needs—of various of its members change. Also the group is washed continuously from without by great waves of social, political, and industrial change which affect it profoundly. For all these reasons the budget needs to be a flexible instrument, not a rigid one. Obviously nothing can be said here concerning the ways and means of achieving this. Flexibility of budgeting is not a function of the budgets themselves; but of the persons and groups who use them. Their revision ought to be as frequent as the changes which affect them; but there are certain canons of judgment which may offer some assistance, and they might be formulated somewhat as follows:

1. The physical, mental, and moral welfare of the individuals of the family, and the family as a group, living and functioning as a harmonious unit, each member of which is the complement of the others.

2. The welfare of the wider social group. Adaptation of family consumption to "least-cost" commodities (those furnished most bounteously and with the least resistance to man's productive efforts); to reduction of social

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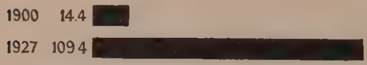
[2] B. R. Andrews, *Economics of the Household*, especially Chapters 2 and 3; John B. Leeds, *The Household Budget;* National Industrial Conference Board, *Family Budgets of American Wage Earners;* Esther L. Little and William J. H. Collon, *Budgets of Families and Individuals of Kensington, Philadelphia;* Bureau of Applied Economics (Washington), *Standards of Living, A Compilation of Budget Studies;* W. F. Ogburn, "Measurements of Cost of Living and Wages," *Annals of the American Academy of Political and Social Science*, Jan., 1919. Cf. also various issues of the *Monthly Labor Review* of the Bureau of Labor Statistics, U. S. Dept. of Labor, and of the *Journal of Home Economics.*

wastes and extravagances; and to building up strong and desirable social institutions, industrial, governmental, educational, and recreational.

3. *Family Uses: Ways of Increasing the Efficiency of Family Expenditures and Uses*

There is one obvious means of making family expenditures more efficient: that is, of course, by coöperating with other families. It is just this possibility which gives peculiar strength to the coöperative movement. For a family is too small a group to secure those economies in buying which a business firm has. Its bargaining must always be done under a heavy handicap which is removed through consumer's coöperation, for then the buyer's strength equals that of the seller. It is characteristic of careless America that coöperatives have had no great development here. Family life is closer to a tradition of independence and self-sufficiency which will ultimately give way before a growing need for coöperation and a recognition of the inevitability of the interdependence of all social groups.[3] We shall come, sooner or later, to coöperation.

But there is also another way in which family expenditures are being made more efficient. A considerable—and growing—proportion of income goes into funds which insure against the various risks of modern life: ill health, accident, unemployment, old age, and death. And another part goes into the facilities of life provided by communal expenditure: education is one of these; and much recreational expense is also governmentally met—national, state, and municipal park systems, for instance—and health is rapidly becoming a matter of public concern so that free clinics and even nursing service are sometimes provided. None of these could be had through independent family expenditure at anything like the rate at which they are now provided and there are wide possibilities of further developments of this sort.



This is the contrast in the number of life insurance policies in effect, 1900 and 1927. (Data Insurance Yearbook.)

When we come to a discussion of the possible means of bettering the modern family's uses of goods after choice has been completed and expenditure made, we are obviously in a field where standards are difficult to set up and where the means to their attainment are far from clear. In our discussion so far we have made no pretense of solving difficulties which are, in our present state of knowledge, insoluble. And we shall not do so here. About all that can be said is that if family consumption is to be strengthened, the family itself will have to be rehabilitated and its members be given a new sense of responsibility for its unity. What this involves, we have already seen. The requirements are of the nature of recasting the old notion of family as father, mother, and numerous children, with a definite home which served as a central rallying point for long-run social life. That kind of family is becoming scarce. The new family is a definitely smaller group with weakened economic bonds and with far fewer interresponsibilities. The old compulsions to economic consumption fail when these changes approach completion and the income of the group comes to be contributed by one or two members and when the rest have an interest only in consuming. The causes of discord outweigh the bonds of concord. Somehow, then, perhaps, society can arrange so that income is made a family matter, not an individual matter.[4] It seems to be clear that unless this is done, consuming will come to be more and more an individual matter and the family will break down completely. What would happen in that case is not far to seek. We can see it now. Other groups are forming in our present society which are taking over the old family functions. Education goes to the schools, amusements to theaters, playing fields, and dance halls, eating to the restaurant, sleeping to the club and hotel, courtship to the park, the automobile, and the streets. The home of such a city as New York has already degenerated beyond recognition into temporary quarters in a barracks-like structure occupied in common with fifty or a hundred other families. But this is not a home in the old sense; and as a consuming group many of its attributes have disappeared. Whether it is worth while to do what is socially necessary to rehabilitate family life seems to be a question we are unwilling to face. But our unwillingness to face it is, in a way, a solution, for if we keep our backs turned a little longer, what is left of home life may have disappeared altogether. We shall then be concerned not at all with family budgets but with school, municipal, dance hall, and club budgets, for they will be the wider groups to which the individual must look for social comfort and for efficiency in the employment of goods.

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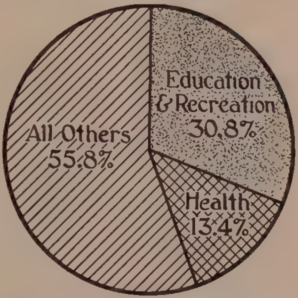
[3] For discussions of the coöperative movement see Chapter 41 below.



This chart shows the relative amount of funds expended by the city of New York on education, health, and recreation for its citizens. Health includes street cleaning, sewers, water supply, and public baths; education and recreation includes schools, libraries, museums, parks, and playgrounds. (Data from *World Almanac*, 1929.)

There is a good reason, of course, why the world will not become entirely individualized in its uses of goods—besides, that is, our incorrigibly social natures. This is that the varieties of modern goods lend themselves so much more efficiently to social exploitation. A machine-made talking machine, an automobile, a symphony orchestra can be enjoyed in company at less cost to each individual. Food can be better prepared and more cheaply handled in a restaurant. Paved and lighted streets are only possible to *Communities.*

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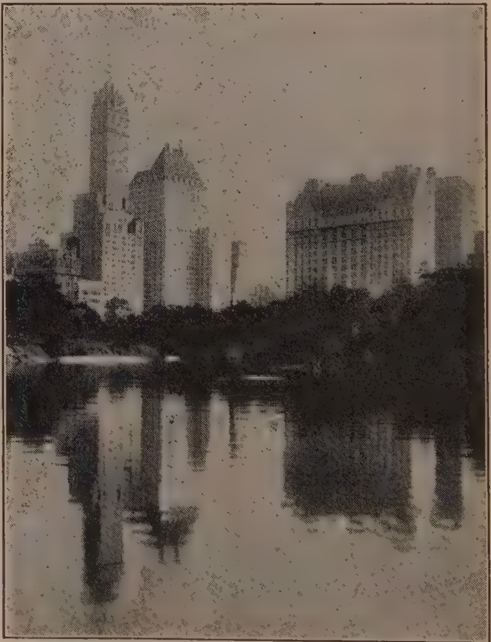
[4] Cf. Paul H. Douglas, *Wages and the Family*, 1925. There are certain definite objections to a family wage system not discussed here. But from the consuming point of view such a system offers considerable advantage.

It is difficult for the daughter of the family to entertain her young man in the tiny apartments typical of city life. Courtship is not a social procedure and the development of that innocent intimacy which is the prelude to happy marriage is most difficult for modern young people. The resort to the park is not a happy solution but does for a makeshift.

And so we develop a peculiar social culture at once more isolated and more socialized than was ever characteristic of any other society. On one hand we have the tiny house or apartment, or the bachelor club or hotel, where people may be more alone than any individual ever was in the houses of our ancestors; and on the other hand we have the highly socialized features of urban life, the theaters, the restaurants, and, of course, the factories and offices. One cannot certainly say whether this is the future mode of development or whether the family will be reconstituted; but most of us will have a suspicion, though tinged with regret, that the future belongs to the cities and that life will have to be lived in hotels. If this is so it will be the task of the social student of the future to examine the consuming activities of the new groups now forming and to formulate standards rather for them than for a family life which has disappeared.

In so far as the family persists as a consuming unit the means of bettering its uses of goods consists in building toward standards of complete and harmonious group development and of the economical exploitation of the goods-resources at its disposal.

It must be said that the forces at work upon the family have tended to break down old standards of use and have failed to substitute others for them. What



Three of New York's choicest residential hotels—the Plaza, the Sherry-Netherlands, and the Savoy-Plaza—seen across a lake in lower Central Park: a high degree of socialization, combined with access to open spaces. It is available, however, only to the very rich. (Wide World Photo.)

"plain living" there still is finds it hard to persist in the face of the professional temptation of advertisers, guided in many cases by university psychologists. And while it may be that civilization has passed the stage of development at which plainness persists as a virtue, it has hardly yet reached the stage when it can afford to trust the using of goods to the impulses of its abnormal adults and the aberrations of its children. We need not be abstemious, but we need still to be wise.

But if, as we believe, it is not any change in human nature, but indeed, the shifting of the forces which play upon it which have caused the phenomena of unwisdom to which we have adverted, and that have made "flappers" of our young women and "cake-eaters" of our young men, no amount of interior taking thought or of effort at checking modern tendencies can have any considerable effect. Unless we are willing to control the forces underlying the changes, about all we can do is to go along with them, to accept the reformed status of the family and to accelerate the process of forming new social groups which will exert a real influence upon their individuals in the direction of wisdom in use.

A modernized blast furnace; more efficient devices for producing are the contribution of industry to progress in consumption. (Photo Hine.)

4. *Industrial Uses: Business Choices, Expenditures, and Uses*

There is one way in which goods are used which has not been discussed, and which it is important that we should not neglect. This is the use of them by industry—or, to be precise, by the businesses which operate industry.

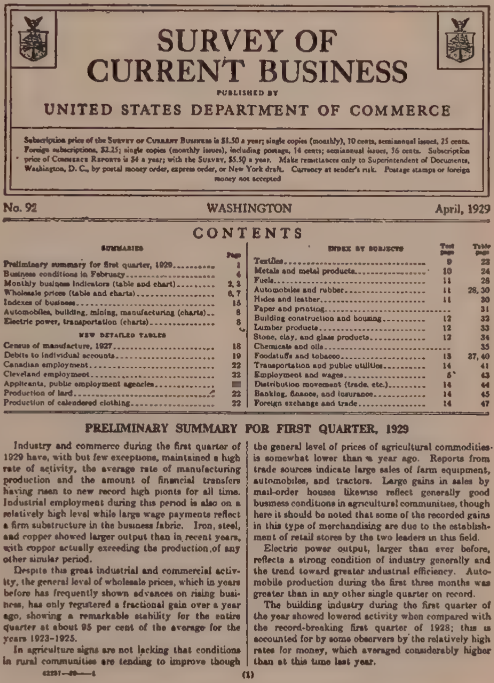
It is not difficult to understand that these uses are not final uses in the sense which is meant when we say that an individual has consumed something. Businesses use goods to make more goods. And, on the whole, they succeed in the effort to multiply the total usefulness of materials passing through their hands. This might be called intermediate consumption to distinguish it from the uses to which goods are put in final consumption. Its problems are large because there are very few things one can think of which do not require several—and usually many—of these intermediate consumptions to have taken place before they can come into being. The blast furnace uses up coal, limestone, and iron ore, but it makes pig iron. And the pig iron is consumed in its turn by other factories which destroy its character as pig iron but make of it something else. In combination with other materials it may find a final use as the wheels of a freight car, as the beams of a building, as a sewer pipe, or as a pair of roller skates. Even then it may only be contributing to the finishing of a good which seemingly has had no relationship with the iron mine. It may, for instance, go into machinery for cutting or sewing clothing or for pressing paper or for making furniture.

These various and complex processes of industrial use and shaping, it is important to see, play a large part in determining the size of the ultimate product of industry. And ultimate product is the social income, the income of consumers as a whole. Businesses, like individuals, vary in wisdom. Some make foolish choices; some make wise ones. Some spend incautiously; some shrewdly. Some use the goods which come to them wastefully; some efficiently. And since the total product of these choices and spendings and uses in finally finished goods is the income of society, the social student may legitimately interest himself in the efficiency of the whole process.

When he examines the choice process with this in mind he is at once struck with the fundamentally different nature of the phenomena here from those he met with in studying individual choice. For here choice is highly rationalized and is carefully budgeted to keep it rational. This was not so in the old-fashioned business which proceeded by rule-of-thumb according to the shrewdness of the individual concerned; and it is of course not true in the survivals of the old-fashioned businesses there are in the world today. But in the really modern business exact planning has been carried as far as is possible in the light of present knowledge and shows promise of being carried further when that knowledge is extended.

It would be difficult to suggest improvements upon the planning activities of the best representatives of large-scale business. They are experimental, exact and carried out a good way ahead of the event. What criticism is to be made is not to be made of purchasing departments themselves but of the managements directing their activities. For often management hinders the straightforward carrying out of the programs of its technicians. Profits are, as we have said in our discussion of production, sometimes to be made by withholding goods from the market rather than by pushing production programs to the limit of efficiency. And withholding, stoppage of regular schedules, throws planners off. They cannot see ahead when all ahead is uncertainty. Not all uncertainty is due to management, of course. Much of it is traceable to the large uncertainties of industrial life which are the continual risks of business.

These latter uncertainties, however, are also, in a sense, failures of planning—of the larger planning which envisages the whole business as a complement of other businesses, the whole making an industry. And even here, there may sometime be a possible extension of planning to include the relations of industries to each other in providing the whole social income. We have discussed this as the problem of coördination. But accomplishment here is still in a distant future. An instance of what is meant by the shortsightedness of business is furnished well enough by the failure of most American businesses to foresee and prepare for the critical depression years of 1929–30. Many of them found themselves "overextended." They had bought large stocks of goods at prices far higher than those at which they could be sold. The same situation arises whenever depression recurs. And, as we know, it does recur with cyclical periodicity. It is difficult to see how such difficulties as these, which lead directly to social loss and inefficiency, can be avoided except by closer coöperation among businesses and by giving up completely the old notions of the competitive advantages to be gained by secrecy which were always largely imaginary.



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No. 92 WASHINGTON April, 1929

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PRELIMINARY SUMMARY FOR FIRST QUARTER, 1929

Industry and commerce during the first quarter of 1929 have, with but few exceptions, maintained a high rate of activity, the average rate of manufacturing production and the amount of financial transfers having risen to new record high pionts for all time. Industrial employment during this period is also on a relatively high level while large wage payments reflect a firm substructure in the business fabric. Iron, steel, and copper showed larger output than in recent years, with copper actually exceeding the production of any other similar period.

Despite this great industrial and commercial activity, the general level of wholesale prices, which in years before has frequently shown advances on rising business, has only registered a fractional gain over a year ago, showing a remarkable stability for the entire quarter at about 95 per cent of the average for the years 1923–1925.

In agriculture signs are not lacking that conditions in rural communities are tending to improve though the general level of prices of agricultural commodities is somewhat lower than a year ago. Reports from trade sources indicate large sales of farm equipment, automobiles, and tractors. Large gains in sales by mail-order houses likewise reflect generally good business conditions in agricultural communities, though here it should be noted that some of the recorded gains in this type of merchandising are due to the establishment of retail stores by the two leaders in this field.

Electric power output, larger than ever before, reflects a strong condition of industry generally and the trend toward greater industrial efficiency. Automobile production during the first three months was greater than in any other single quarter on record.

The building industry during the first quarter of the year showed lowered activity when compared with the record-breaking first quarter of 1928; this is accounted for by some observers by the relatively high rates for money, which averaged considerably higher than at this time last year.

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The United States Department of Commerce has become invaluable to the business world as an agency for the gathering and disseminating of statistical information.

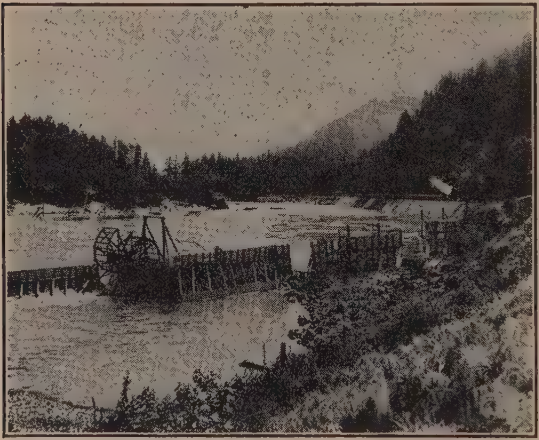
Once this idea has permeated throughout the business world, the way is prepared for the better gathering of statistical material concerning the larger phases of industrial activity which concern more than one business. The analysis and interpretation of these ought to assist materially in forecasting more closely future industrial events and thereby preparing for them before they occur. It may in time even result in sufficient social control for the adaptation of industrial potentialities to human needs, once its accuracy and dependability have been demonstrated.

As to the increase in the efficiency of business expenditures the same general trend is to be noted and seems promising. Affiliation with larger groups, the movement we have called combination, will certainly make for more efficient expenditure because of the superior facilities for the exchange of information and the securing of all possible economies. It may also be noted that every advance in production technique which cuts down costs by saving materials or time, is indirectly an addition to the efficiency of expenditure.

A similar observation will perhaps suffice for pointing out ways in which businesses may make better use of the wealth they consume. Their uses—their consuming—consists in producing. Consequently as they learn to produce more efficiently the efficiency of their consumption increases. Better production is the only necessary contribution of business to the more efficient use of wealth. This, however, is a problem in production. But it serves to illustrate the necessary connection between consumption and production and to demonstrate the close-knit nature of all industrial activity.

5. *Regional or National Uses*

Such wide ways of use as are in practice in national or regional areas are more difficult to explain than any other—upon psychological grounds. It is conceivable that we may, by study and experimentation, come in time to understand so well why it is that individuals make certain choices that we shall be able to predict what, in given circumstances, a certain individual will do. It is even conceivable that we may make some progress in understanding such a group as the family. But when we come to ask why it is that in Boston brown eggs command a premium and in New York white ones are preferred we are really up against so complicated a situation that psychological explanation seems useless to attempt.



Because salmon happens to be a "preferred" sea food, the rivers of the Puget Sound country, of British Columbia, and of Alaska are made to yield an immense annual harvest. This is a salmon wheel on the Columbia River. (Photo Ewing Galloway, N. Y.)

In these circumstances we usually fall back upon some economic fact which seems determinative. There is always, however, a vast gap between the fact and the reaction—so wide indeed that these explanations are frequently challenged. The materialistic interpretation of events—that is, the reference of them to some likely concurrent circumstance—leaves a good deal to be desired. There is in fact no establishment of actual causal relationship at all. When, for instance, we say that there has been a change from a preponderantly meat-liquor diet to a preponderantly cereal-sugar-vegetable diet because nature provides the latter group of foods more generously, we are on rather insecure ground. It may be that we should have made the change anyway on account of the superior efficiency of the diet. Perhaps we should even prefer cereals and vegetables if they were more costly than meat and liquor.

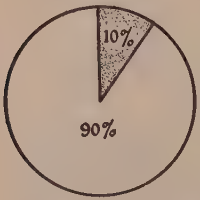
This is only to say that we have not accumulated anything like the amount of data necessary for a genuine group psychology. We cannot certainly say *why* corn bread is not eaten in New England nor why dogfish is consistently refused in New York markets. We seem to be on safer ground when we cite the cheapness of the most widely used foodstuffs and the dearness of the less used ones. But admittedly we cannot be certain with psychological certainty. When we are told that the "royal purple" of ancient times was not other than the common cotton cloth of today, we wonder why we value cotton cloth so little and prefer silk and wool instead. Is it because wool is more suited to our winters? But we use wool in summer too. And silk is worn all winter now by most women who can possibly afford it. And these are dearer than cotton! Some better explanation than the economic one that habitually refers a complex event to a single fact is evidently needed.

We shall have to avoid, for the present, then, the attempt to explain just *why* it is that snails are eaten in France to our intense disgust and *why* it is that Frenchmen have no proper conception of pumpkin pie or ham and eggs. But we can say, as we have said in previous sections, that, from the economic point of view, certain habits would be more rational than those now in use, that they would be less a drain upon our soil and energy; and that as we move in their direction the standards of life are raised for every one. We have not gone wholly wrong in this matter. We have already said that many adaptations that seem reasonable have been made. What, for instance, could be more rational than that the Pilgrims should have feasted at Thanksgiving upon wild turkey? And if we are to eat turkey at all surely Fall is the season. This is a comparatively trivial illustration. There are others more important.

Distinctly American: the modern form of the pork and beans developed by Puritan housewives.

Professor Carver cites the cases of the bean and the codfish cake: "The prosperity of this country is due in some small measure at least to the wise food habits that were developed under pioneer conditions. It would have been easy, perhaps natural, for those pioneers to have insisted on the kinds of food to which they had been accustomed in their European home. If they had cherished those prejudices they would have found them expensive luxuries in their new home. Instead of cherishing such prejudices they developed new food habits more in keeping with the new conditions. They managed to find ample nourishment and pleasure in foods that could be economically grown. Pork and beans furnish an excellent illustration.

Here is a highly nutritious combination and reasonably well balanced. Though not quite so easily digestible as some others, and perhaps not well suited to the needs of indoor people, it served admirably for outdoor workers such as cattlemen, lumbermen, and farmers. At the same time it was economical. Hogs ran wild in the woods and found their own living. They were highly prolific and multiplied rapidly. Beans were easily grown and required no expensive milling or processing to prepare them for food. Besides, being legumes, they tended to replace rather than to exhaust the nitrogen of the soil. The housewives who mastered the art of making this highly nutritious and economical combination into a delectable dish were important factors in laying the foundation for the present prosperity of our country. Codfish balls furnish another illustration. This combination of codfish, which the ocean furnished in apparently inexhaustible quantities, potatoes which could be grown in every garden, and pork fat, a by-product of hog raising, was a well balanced and nutritious combination made agreeable by the housewives' art. Time would fail us to speak of pumpkin pies, green corn, succotash, hasty pudding and a multitude of other delicious compounds that delighted as well as nourished our ancestors at low cost in human labor. Mention must be made, however, of Johnny cake, one of America's chief contributions to the happiness of mankind, made of the meal of an indigenous cereal, the largest crop now grown here, and the most magnificent corn grown anywhere in the world. Even the despised buckwheat, grown on many soils as a catch crop, but grown mainly on soils too poor and cold for anything else, has yielded to the art of our cooks and given us buckwheat cakes."[5]



Of all the corn raised in the United States only 10 per cent, as shown by the shaded section on this graph, is used directly for human food.

Equally important is the fact that wheat seems to us desirable as the main item of our diet and that wheat is the one food plant which is adaptable to the semiarid lands that lie just east of the Rockies. Our refusal to eat corn in as direct a form as we eat wheat is not so rational. We feed it to animals and lose much of its efficiency. But it must be said that, though we are somewhat irresponsible here in the first instance, we have fairly well adopted a rational diet of meat. For it seems that of all good converters the hog is most efficient—unless we consider milk. The cow is really our most efficient animal. She is capable of converting roughage—hay, oil cake, and the like—into human food. And when she has done this for years there is still her flesh to be eaten. But the hog comes close after. Of all the animals whose flesh we eat, the humble hog is most efficient in converting grain into meat.

However, as Professor Davenport says, we lose a good deal by not eating most of these cereals ourselves, though we should have to admit that meat sometimes comes to us almost free—as when cattle live on the nontillable lands of the western ranges or sheep crop the stony hill-pastures of New England. " . . . the moment plow land is seeded down to pasture, that moment is its producing power vastly diminished—reduction number one. Again all animal foods are from six to thirty-six times as expensive in food values as are the grains from which they are made—reduction number two. That is to say that to feed grain to an animal and then eat the animal is to sacrifice quantity to appetite and to diminish physiological welfare at a ratio of twenty or thirty to one. Animal foods we must have to be well; but, except for pork, they can be produced when necessary from field crops that we ourselves cannot consume and yet are necessary to good farming—clover and alfalfa, for example." [6]

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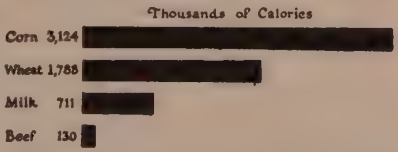
[5] T. N. Carver, *The Economy of Human Energy* (Macmillan, 1924), pp. 43–44.

The relative efficiency of animals in converting vegetable matter into meat may be seen from the following table:

HUMAN FOOD PRODUCED FROM 100 POUNDS OF DIGESTIBLE MATTER CONSUMED [7]

Animal	Edible Solids Lb.	Animal	Edible Solids Lb.
Cow (milk)	18.0	Poultry (eggs)	5.1
Pig (dressed)	15.6	Poultry (dressed)	4.2
Cow (dressed)	9.4	Lamb (dressed)	3.2
Calf (dressed)	8.1	Steer (dressed)	2.8
Cow (butter)	5.4	Sheep (dressed)	2.6

It is by such exact criteria as this that the consuming habits of a nation ought to be guided. Yet the matter is much more complex than it once appears here. It may be profitable to pursue the line of inquiry we have opened up somewhat further to illustrate at once the difficulties in the way of rational choice for a nation, even when its intentions are good, and some of the means available for overcoming these difficulties—in so far as they are attributable to lack of knowledge, at least.



This chart compares *on the per acre basis* the value in calories of four important foods. (From Farmers' Bulletin No. 877, U. S. Dept of Agr.)

We have seen by our last illustration that milk is the most efficient form of animal food. But after all milk is not the most efficient of all the kinds of food. For normal, adult persons, it is no different from other foods, which is to say that there are no special properties in milk which makes it the super-food implied in certain advertisements of milk dealers and others interested in its voluminous sale. All foods are broken down in the digestive process and the high cost of living has made the dietitians' problem one of searching for the cheapest energy-yielding foods.

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[6] E. Davenport, "Wanted: a Program of Food Production," *The Country Gentleman*, Jan. 26, 1918.

[7] W. H. Jordan, *The Feeding of Animals*, 1901.

Of all animal products, milk, perhaps, still is cheapest, considering its food value. But in comparison with cereals for instance, it becomes a luxury to be indulged in only by the luxury-loving. Under present conditions milk is to be ranked among the more expensive foods—the elements of nutrition can be obtained more cheaply from other sources.

Two tables are here included which make this contrast. They are taken from the report of the Governor's Tri-State Milk Commission (printed by the State of Pennsylvania, 1917). They were prepared for the Commission by Dr. Alonzo E. Taylor.

SOME FOOD VALUES COMPARED

1. *Food Value of Milk and Other Animal Products*

Article	Weight	Protein Per Cent	Fat Per Cent	Calories
Milk	1 lb.	3	3.5	300
Butter	1 lb.	..	85.	3600
Cheese	1 lb.	25–33	25–30.	2000
Cheese, lean	1 lb.	40	3.	900
Eggs	1 lb.	11–12	9.3	600
Beef, fat	1 lb.	15	26.	1400
Beef, medium	1 lb.	19	7.	900
Pork, fat	1 lb.	13	26.	1300
Pork, lean	1 lb.	18	13.	900
Fowl	1 lb.	13	12.	750
Herring	1 lb.	11	4.	370
Cod	1 lb.	8	..	160

2. *Milk Compared with Grains, Cereals, and Vegetables*

Article	Weight	Protein Per Cent	Fat Per Cent	Calories
Milk	1 lb.	3	3	300
Flour	1 lb.	10–11	..	1500–1600
Oatmeal	1 lb.	14–16	6	1700
Bread	1 lb.	8–9	..	1200
Rice	1 lb.	6–8	..	1600
Macaroni	1 lb.	9–10	..	1600
Sugar	1 lb.	..	..	1850
Split peas	1 lb.	24	..	1600
Peanuts	1 lb.	19	29	1900
Raisins	1 lb.	3	3	1400
Potato	1 lb.	1.5	..	350

Evidently, then, a population seeking after wisdom in consumption will treat milk—for adults at least—only as a by-product and will confine its diet largely to the more efficient foods. Yet, it will not give up meat or even milk altogether—for these are sometimes produced nearly free.

It is interesting that the United States displays an increase in its milk consumption regardless of its cost; but perhaps the most interesting contemporary dietary change is the increase of other relatively high-priced foods such as fresh vegetables. These are important in the diet not because of richness in calories but because they are an important source of vitamins (A, B, and C) and because they furnish certain mineral salts and roughage essential to a rounded regimen. The greatest difficulty with the food-supply of most of the poorer classes of the world is that, even when it contains sufficient nourishment, it is often of the wrong kind. Cereals, meats, and root vegetables are the basis; but these need supplementing with leafy and green vegetables. The American salad habit, for instance, although costly, contributes enormously to well-being. The same is true of the wide use of fruits and sugar.

That these relatively costly items have been growing into the American diet is partly a result of our prosperity. In any prosperous country there seems to be a decrease in the use of cheap foods and an increase of high-priced ones. We have remarked the substitution of cereals for meats; there is to be noted also a contrary tendency to shift from cereals to vegetables. The acreage of 19 of these vegetable crops, totaled together, appears to have run as follows from 1919 to 1928:

NINETEEN VEGETABLE CROPS 1919–1928

(In thousands of acres)

1919	1586	1924	2373
1920	1697	1925	2548
1921	1436	1926	2461
1922	1943	1927	2435
1923	2014	1928	2711

This is a very considerable increase. And if we examined the gross consumption of all cereals for recent years we should discover a decline. The decline would be greater for corn meal, however, than for wheat flour, and for obvious reasons. Corn meal is a cheaper, heavier, less palatable food. It was the staple of pioneer American communities. Its use has become less and less as our development has gone on. We consume less wheat, even, in the form of flour; but more in the form of prepared breakfast cereals and the like—one of the most expensive kinds of food there are.

There seems also to have come something like stability in the consumption of meat. In the last decade there has been little change in the use of beef, veal, or lamb and mutton; but some increase in the use of pork. The increase in pork may have been due to relatively low prices; and part of the corn crop, not used as corn meal, may have been fed to hogs and used that way. Such shifts are taking place very rapidly at present. The corn crop is used more and more as animal food or as other kinds of food products such as salad oil or corn-syrup. In some instances cheapness appears to be an object; in certain others it does not. The consumption of poultry and eggs, and of dairy products has expanded enormously.[8]

Clear and easily available information concerning possible choices has never yet existed. In this, however, a great deal of improvement is to be recorded, with a promise of more to come. This subject can scarcely be opened without referring to *Your Money's Worth*, a book written by Messrs. Chase and Schlink [9] which offered in a popular treatment a practical means for achieving wisdom in consuming. The argument followed the method of debunking the claims of those who advertise their wares in the superlative terms we know so well, and of showing how a better procedure could be followed. We shall not try to resume the argument of the book—students are urged to read it—but it may be useful to repeat some of the suggestions which are offered there:

Ask advertisers to produce the scientific facts upon which their claims are based: also storekeepers and canvassers.

Refuse to buy staple goods under brand names which conceal the real character of the article.

Ask your Congressman to obtain the release of such official information as is available in government departments: especially the Bureaus of Standards and Chemistry and the Department of Agriculture.

Compare coldly competitive arguments.

Call attention to known misrepresentations.

Insist on specification.

Look for weights and labels on goods; compare them with advertising and sales-talk.

When you hear the word "guarantee," and when you read a testimonial, laugh heartily.

There are others, but these are most trenchant. All of which is to say that the possibilities of improvement are vast and readily available to individuals and groups. In this as in other areas of economic life we are far from having exhausted the means at our command for betterment. It needs to be said, however, that this kind of effort fails to touch some of the more important problems. Consumption needs not only to be adjusted to the individual but also to nature's determinants. It is not only important that the consumer be protected in his bargains with those from whom he buys against adulteration, misrepresentation, and overcharging; but it is also important that as nations and regions we do and use the things best suited to the environment. Choices of this sort are indirect and difficult to accomplish wisely. But we shall all live better if we make them. Consumption, no less than trade or production, can contribute to or can hinder the carrying out of social programs. It too ought to be conceived in an instrumental sense.

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[8] *Recent Economic Changes in the United States*, 35–7

[9] Published by Macmillan in 1927.

We have used the illustration of foods only because they form a readily available example. But in all truth it must be admitted that the example is somewhat unfair. For one can reduce foods to calories and one can therefore measure their efficiency. This would be much less true of the other necessities of life such as clothing and shelter, though one can say that each person needs so many cubic feet of air space and so many pounds of wool and leather for minimum protection against the weather. But these are only minima and admittedly bad criteria. For clothes are more than protection, and living quarters more than shelter. In a way food is more than nourishment too, however, so that we have to fall back on pointing out values and leaving the whole matter to individual determination.

In reality that is pretty much what we do. Positive consuming habits cannot be forced. If, when Boston housewives have been informed that white eggs are every bit as good as brown ones, and if they still persist in paying for the kind they prefer ten or fifteen cents more a dozen—well, what is there that can be done about it? And if people everywhere have been appraised of the virtues of corn bread and still prefer to pay from six to thirty-six times as much for it in the form of pork—what is there that can be done about that? After our experience of the prohibition of alcoholic beverages, it seems unlikely that we shall try sumptuary legislation of this sort on a national scale concerning any diet matters of less importance.

One thing that can be done is, however, to institute some sort of control over habit-influencing agencies of nation-wide scope. Another, possibly, is the carrying on of frank propaganda for breaking down prejudices. The most important of the habit-influencing agencies at the present time is commercial advertising. In the advertising idea there are potentialities of progress—but not as it is carried on at present, without reference to the social welfare involved in its results. Not only is the expense of advertising largely a waste but also a far greater waste is involved in its temptations to unwisdom in consuming. And these temptations are not confined to individuals or to small groups, but extend to whole nations. A socially directed advertising, however, which devoted itself to the dissemination of information concerning rational alternatives, and which helped to make choice habits flexible in the interest of progress, might be a worthy civilizing instrument.

PART V

RAISING THE LEVELS OF LIVING THROUGH THE BETTER MANAGEMENT OF GOVERNMENT

CHAPTER 35

GOVERNMENT AND INDUSTRY

1. *The Services of Government*

If we were to analyze the average man's notion of what the government is, what it does and what it ought to do, what would we get? Probably a variety of answers, the tone of which would depend to a great extent upon the experiences of those from whom we sought our answers. Mr. Smith, who had only recently paid his income tax might give us a somewhat different definition from that of Mr. Jones, who has just received the contract to construct the new city hall. The soap-box orator who had been recently arrested for disturbing the peace would have yet a different view. We are not, however, here interested in abstractions created by theorists of government. We are rather concerned to know what influence, if any, government may have upon the levels of living. What is the function of government in American economic life? Does it render any service for which Smith should be required to contribute? Could not Smith better do all of these things for himself rather than submit to be taxed so that the servants of the government may be paid to do them?

"I DON'T SEE NO SENSE IN EARNIN' MONEY JUST TO HAVE TH' GOV'MENT TAKE IT AWAY FROM ME IN TAXES."
"ME NEITHER."

A comfortable excuse for lack of enterprise? Perhaps, but a good many people unthinkingly express themselves in somewhat the same way. (By courtesy of the Philadelphia Public Ledger. ©1928 by Philadelphia Public Ledger.)

Let us follow a citizen for a day and note the services rendered to him by government. He arises in the morning, bathes in water supplied by the municipality; eats a breakfast cooked over gas piped through municipally owned streets. He drives his car to his place of business over these same streets, where traffic is regulated by the police. His daily safety depends upon a corps of city employees—police, firemen, inspectors (elevator, boiler, food, and health). His office is in a building which has been constructed according to city regulations, thus assuring him safety, light, and air. His children attend city schools and perhaps play on municipal playgrounds. His wife may shop at a municipal market and ride home on the busses which operate under municipal grant. On a summer evening he and his family may attend a municipal concert in the city-owned park.

One who lives in the country does not have quite so much done for him as his city cousin, but nevertheless is the recipient of a great many services rendered by the government. He drives over roads improved and maintained by the county or state; sends his children to public schools; receives aid from a score of government experts, regarding his own and his family's health, his crops, the health of his live stock, the markets, and many other matters. In the summer both the rural and urban dweller may vacation in one of the many Federal Parks. They may travel abroad with the assurance of certain protection as a citizen of the United States. Both benefit from the investigations of certain bureaus of the Federal government. The issuing of storm warnings; control of epidemics among men and beasts; setting of standards; the search for new and valuable crops—these are a few of the services from which we all benefit.

The Susquehanna Trail, a beautiful piece of road engineering between Scranton and Binghamton. Fifteen years ago it was necessary to struggle through mud and over stones to accomplish this journey. Such roads are by no means unusual today; and they are provided by the government. (Courtesy Portland Cement Association.)

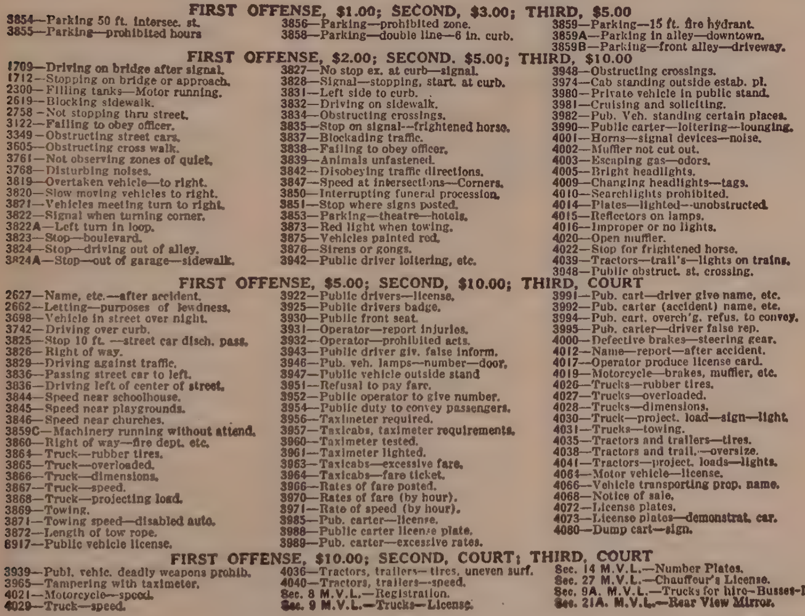
2. *A Classification of Governmental Functions*

Thus we get some idea of what is meant by government. If we attempted to make a general classification of the functions of government, something like the following would result:

1. *Maintanence of law and order.* Without government each individual would be forced to protect his own property and maintain his personal freedom. The government attempts to interpret and guarantee certain property rights and a certain personal freedom. This function is participated in by state and local governments as well as the Federal authority.
2. *The police power.* When the welfare of the larger groups is at stake the government may set aside certain private property rights for the protection of "health, welfare or morals." Necessarily this involves certain restrictions on the actions of individuals. Americans are usually thought to be jealous of their personal freedom, but this does not mean that each of us, as an individual, ought always to be

permitted to do just as he sees fit. As a citizen, one is free to drive his automobile on the highways but he must keep to the right when meeting other cars and must maintain a limited speed. He may operate a restaurant, but he must keep it tolerably clean; he may own land, but he may not maintain on it a public nuisance.

3. *Enforcement of contracts.* All economic life operates on a contractual basis. The government, through its courts and through executive enforcement, has thus at least a potential part in every transaction.
4. *Protection against disease and against the forces of nature.* Here there are meant such activities as those of the Health Bureau, flood control commissions, the United States Weather Bureau, and the like.
5. *Education.* This highly important service of the government is participated in by Federal, state, and local governments, in various proportions, most responsibility falling, however, upon local units themselves, within which the educative process is carried on.



FIRST OFFENSE, $1.00; SECOND, $3.00; THIRD, $5.00

3854—Parking 50 ft. intersec. st.
3855—Parking—prohibited hours
3856—Parking—prohibited zone.
3858—Parking—double line—6 in. curb.
3859—Parking—15 ft. fire hydrant.
3859A—Parking in alley—downtown.
3859B—Parking—front alley—driveway.

FIRST OFFENSE, $2.00; SECOND. $5.00; THIRD, $10.00

1709—Driving on bridge after signal.
1712—Stopping on bridge or approach.
2300—Filling tanks—Motor running.
2619—Blocking sidewalk.
2758—Not stopping thru street.
3122—Failing to obey officer.
3349—Obstructing street cars.
3605—Obstructing cross walk.
3761—Not observing zones of quiet.
3768—Disturbing noises.
3819—Overtaken vehicle—to right.
3820—Slow moving vehicles to right.
3821—Vehicles meeting turn to right.
3822—Signal when turning corner.
3822A—Left turn in loop.
3823—Stop—boulevard.
3824—Stop—driving out of alley.
3824A—Stop—out of garage—sidewalk.
3827—No stop ex. at curb—signal.
3828—Signal—stopping, start. at curb.
3831—Left side to curb.
3832—Driving on sidewalk.
3834—Obstructing crossings.
3835—Stop on signal—frightened horse.
3837—Blockading traffic.
3838—Failing to obey officer.
3839—Animals unfastened.
3842—Disobeying traffic directions.
3847—Speed at intersections—Corners.
3850—Interrupting funeral procession.
3851—Stop where signs posted.
3853—Parking—theatre—hotels.
3873—Red light when towing.
3875—Vehicles painted red.
3876—Sirens or gongs.
3942—Public driver loitering, etc.
3948—Obstructing crossings.
3974—Cab standing outside estab. pl.
3980—Private vehicle in public stand.
3981—Cruising and soliciting.
3982—Pub. Veh. standing certain places.
3990—Public carter—loitering—lounging.
4001—Horns—signal devices—noise.
4002—Muffler not cut out.
4003—Escaping gas—odors.
4005—Bright headlights.
4009—Changing headlights—tags.
4010—Searchlights prohibited.
4014—Plates—lighted—unobstructed.
4015—Reflectors on lamps.
4016—Improper or no lights.
4020—Open muffler.
4022—Stop for frightened horse.
4039—Tractors—trail's—lights on trains.
3948—Public obstruct. st. crossing.

FIRST OFFENSE, $5.00; SECOND, $10.00; THIRD, COURT

2627—Name, etc.—after accident.
2662—Letting—purposes of lewdness.
3698—Vehicle in street over night.
3742—Driving over curb.
3825—Stop 10 ft. —street car disch. pass.
3826—Right of way.
3829—Driving against traffic.
3836—Passing street car to left.
3836—Driving left of center of street.
3844—Speed near schoolhouse.
3845—Speed near playgrounds.
3846—Speed near churches.
3859C—Machinery running without attend.
3860—Right of way—fire dept. etc.
3864—Truck—rubber tires.
3865—Truck—overloaded.
3866—Truck—dimensions.
3867—Truck—speed.
3868—Truck—projecting load.
3869—Towing.
3871—Towing speed—disabled auto.
3872—Length of tow rope.
6917—Public vehicle license.
3922—Public drivers—license.
3925—Public drivers badge.
3930—Public front seat.
3931—Operator—report injuries.
3932—Operator—prohibited acts.
3943—Public driver giv. false inform.
3946—Pub. veh. lamps—number—door.
3947—Public vehicle outside stand
3951—Refusal to pay fare.
3952—Public operator to give number.
3954—Public duty to convey passengers.
3956—Taximeter required.
3957—Taxicabs, taximeter requirements.
3960—Taximeter tested.
3961—Taximeter lighted.
3963—Taxicabs—excessive fare.
3964—Taxicabs—fare ticket.
3966—Rates of fare posted.
3970—Rates of fare (by hour).
3971—Rate of speed (by hour).
3985—Pub. carter—license.
3988—Public carter license plate.
3989—Pub. carter—excessive rates.
3991—Pub. cart—driver give name, etc.
3992—Pub. carter (accident) name, etc.
3994—Pub. cart. overch'g. refus. to convey.
3995—Pub. carter—driver false rep.
4000—Defective brakes—steering gear.
4012—Name—report—after accident.
4017—Operator produce license card.
4019—Motorcycle—brakes, muffler, etc.
4026—Trucks—rubber tires.
4027—Trucks—overloaded.
4028—Trucks—dimensions.
4030—Truck—project. load—sign—light.
4031—Trucks—towing.
4035—Tractors and trailers—tires.
4038—Tractors and trail.—oversize.
4041—Tractors—project. loads—lights.
4064—Motor vehicle—license.
4066—Vehicle transporting prop. name.
4068—Notice of sale.
4072—License plates.
4073—License plates—demonstrat. car.
4080—Dump cart—sign.

FIRST OFFENSE, $10.00; SECOND, COURT; THIRD, COURT

3939—Publ. vehic. deadly weapons prohib.
3965—Tampering with taximeter.
4021—Motorcycle—speed.
4029—Truck—speed.
4036—Tractors, trailers—tires, uneven surf.
4040—Tractors, trailers—speed.
Sec. 8 M.V.L.—Registration.
Sec. 9 M.V.L.—Trucks—License.
Sec. 14 M.V.L.—Number Plates.
Sec. 27 M.V.L.—Chauffeur's License.
Sec. 9A. M.V.L.—Trucks for hire—Busses-Lic.
Sec. 21A. M.V.L.—Rear View Mirror.

In Chicago if you are caught in any of these transgressions, you are fined. Note that the offenses are listed according to price. The reverse side of this ticket, which the officer hands the violator, directs him either to appear in court or to "admit the violation and agree to pay the amount listed," which he may send in currency by messenger to the court. (Courtesy Traffic Branch, Municipal Court, Chicago.)

6. *To maintain relations with other nations.* This involves making treaties, settling disputes, and caring for our citizens abroad. With the growing interdependence of nations and with the larger part which the

United States has had in world affairs since the war, this has become a function of great importance. It is one, however, which our Constitution reserves to the Federal government alone.

7. *National defense.* The maintenance of an army and navy is for the purpose of concentrating the defense forces in order to protect the nation from invasion and to enable it to carry out its policies, whatever these may be.

8. *Performance of economic services.* The post office is an important contribution of this kind which comes from the Federal government; but states, counties, towns, and municipalities, in various degrees carry on such services, supplying water or gas, transportation or storage facilities, producing power or marketing goods. We are more reluctant than other nations are to "inject our government into business" but even we Americans frequently find government operation the only feasible way of securing desired results.

The official functions of the State of Nebraska are carried on in this magnificent building—a striking example of the "new architecture," developing to the full the use of planes and aspiring masses, and open everywhere to air and sunshine. (Courtesy Lincoln Chamber of Commerce.)

9. *Regulation and control.* Aside from the control frequently set up to protect health or morals, there are less frequent, but still important governmental controls over business, which come under two heads: (1) the regulation of competition, and (2) regulations of production and price. As we have already noted it becomes a complicated constitutional question to inquire into these controls; but they exist, and are, on the whole, being rather consistently extended.

As is already evident, these functions are divided largely according to the political divisions within our nation. There are Federal functions, those assumed by the several states, and many which might be called local. The latter includes those assumed by counties, cities, and towns. Some are wholly reserved to each political unit; there is overlapping in others.

FEDERAL GOVERNMENT APPROPRIATIONS GROUPED ON A FUNCTIONAL BASIS.

	Estimates of Appropriations, 1931.	Appropriations, 1930.
GROUP I.		
Public Debt:		
Principal	$635,324,000	$623,894,100
Interest	619,000,000	656,000,000
	$1,254,324,000	$1,279,894,100
Veterans of former wars	759,799,895	757,044,485
National defense	719,089,388	692,399,804
Total Group I	$2,733,213,283	$2,729,338,389
GROUP II.		
Legislative	$11,568,208	$10,698,973
Executive	422,320	447,220
Judicial, law enforcement and regulatory commissions	88,310,150	76,922,014
Fiscal administration and control of currency and banking	76,507,067	76,193,434
Foreign relations	16,735,902	14,257,626
Administration of territories and dependencies	1,918,693	872,785
Service agencies to the departments and independent establishment	33,599,520	33,406,455
Civil pensions and allowance	21,148,000	20,797,000
Balance of postal deficiency after deducting losses due to contract air-mail routes, foreign air-mail routes and to transportation of foreign mail in American vessels	50,098,000	57,514,000
Total Group II	$300,307,860	$291,109,507
GROUP III.		
Public health	$20,804,072	$19,774,123
Education	14,491,938	14,410,563
Indian affairs	20,598,330	17,523,516
Conservation of national resources	47,798,767	43,801,966
Aids to Agriculture: Agricultural marketing revolving fund	*	150,000,000
Other aids to agriculture	51,755,016	48,818,044
Aids to labor	6,510,170	6,033,286
Aids to aviation, including losses on contract air-mail routes and foreign mail routes	22,517,630	20,362,620
Aids to industry and trade	14,922,044	13,800,242
Aids to merchant marine, including losses on transportation of foreign mail in American vessels	57,286,042	58,928,750
Public buildings and public works	246,012,061	245,786,830
Bureau of the Census	8,497,000	19,000,000
Total Group III	$511,193,070	$658,239,940
GROUP IV.		
Refunds (taxes, customs, &c.)	$162,528,500	$153,009,000
Trust funds (veterans' insurance, Indian, funds, &c.)	74,617,240	95,318,650
District of Columbia	47,880,228	44,540,115
Miscellaneous	705,050	4,586,050
Total Group IV	$285,731,018	$297,453,815
Total exclusive of postal service payable from postal revenues	$3,830,445,231	$3,976,141,651

*Estimate for 1931 to be submitted later, when amount required can be more definitely determined.

(From *N. Y. Times*, December 6, 1929.)

3. *Expenditures*

Just as individuals and business concerns must constantly make payments of various sorts to obtain the goods and services which they desire, so governments must expend large sums of money annually in order to supply their citizens with the many services mentioned in the previous section. So long as a majority of the nations of the world feel that international disputes can only be settled by using force, the Federal government will of necessity have to expend whatever sums are thought necessary for battleships and for personnel and equipment in the army and navy. The Federal, state, and local governments each must disburse large sums annually in wages and salaries to employees and officials. New buildings must be erected and old ones heated, lighted, and kept in repair. There is an increasing call for new roads and bridges and the improvement of established roads. The public school system draws heavily upon the revenues of the governments. To all of this must be added expenditures for the legislatures, the judiciary, and innumerable departments and bureaus.

Purpose of Issue	1924	1925	1926	1927	1928	1924–1928	
						Total	Per Cent
			Amount (in thousands)				
General buildings and fire.......	$88,662	$58,218	$71,002	$74,242	$79,019	$371,143	5.36
Parks and museums........	30,740	20,367	41,823	42,024	49,891	184,845	2.67
Schools and school buildings......	288,523	323,921	260,274	266,052	218,160	1,356,930	19.58
Roads, streets, bridges.......	380,770	392,676	364,809	407,946	408,070	1,954,271	28.20
Sewers and drainage...........	94,456	130,486	108,559	123,403	115,983	572,887	8.27
Water..........	144,214	117,263	142,939	131,314	117,258	652,988	9.42
Improvements...	107,652	191,612	230,244	220,493	204,186	954,187	13.77
Electric light and gas...........	20,501	19,970	12,499	17,225	9,560	79,755	1.15
Rapid transit, ferries, canals..	25,831	12,857	45,107	88,045	83,393	255,233	3.68
Harbor and water frontage......	26,389	15,328	17,951	34,798	35,922	130,388	1.88
Irrigation.......	19,358	22,696	13,610	8,525	2,496	66,685	0.96
Flood prevention.	16,071	9,807	8,124	3,488	18,117	55,607	0.80
Soldiers' bonus...	72,050	7,650	4,000	13,000	16,000	112,700	1.63
Miscellaneous....	48,143	14,105	12,008	24,149	9,342	107,747	1.55
Funding........	16,278	15,137	10,592	20,262	12,592	74,861	1.08
Net total......	$1,379,638	$1,352,093	$1,343,541	$1,474,966	$1,379,989	$6,930,227	100.00

State and local expenditures 1924–28.

The proposed expenditures of the *Federal* government for 1930 and 1931 are given on page 593. This is worthy of detailed study; it gives a comprehensive picture of the activities of the National government. According to this table military functions require the greatest percentage of the annual expenditure. If we add to this the portion of the fixed debt which goes to pay for past wars, the cost of war in any single year takes an enormous portion of the national budget.

Some idea of the nature of *state* and *local* expenditures may be gained from the accompanying analysis for the years 1924–1928.[1]

By referring to the last column we find that the proportion going for education and roads is approximately one-half of the total expenditure. We need to look at more than one year in order to know something regarding the general tendency of governmental expenditures. Is the cost of government increasing or decreasing? The two charts on page 596 will answer this question. The first shows actual expenditures for each of the three types of government; the second reduces expenditure to "1913" dollars.

Whether considered on a per capita basis or the aggregate of expenditure there is a decided increase in the cost of government. Does this signify an increase in corruption and extravagance in the administration of government? Or is it indicative of the increasing service which local, state, and Federal governments are rendering for us? Or are there yet other reasons which will explain this tremendous increase?

An analysis of all of the reasons for these increases in the cost of government would be quite beyond the scope of this text. However, there are certain things which should be noted as partial explanation:

First—The administration of present day governments is relatively free from corruption and extravagance as compared with governments of a century ago. This statement must not blind us to the fact that there is yet much to be achieved before we have approached really efficient government.

Second—The purchasing power of the post-war dollar is considerably lower than the purchasing power of the dollar previous to the war period. Thus the cost of all government in the United States, Federal, state, and local, in 1926 was approximately $11,125,000,000. In 1913, the total bill was about $2,919,000,000. Expressed in "1913 dollars" the 1925 figure becomes $7,009,000,000, or about two and a half times the 1913 cost of government.

Third—We are asking more of our governments than formerly. The total bill for education in the United States has increased many fold. This is well brought out in the accompanying diagram. The increased use of the automobile has created an unprecedented demand for roads. Roads must be built and maintained collectively if they are to be of greatest service. And this adds another claim upon the government expense account. These are but two of the many things which require enlarged public expenditure.

There seems to be little in growing expenditures to become unduly alarmed

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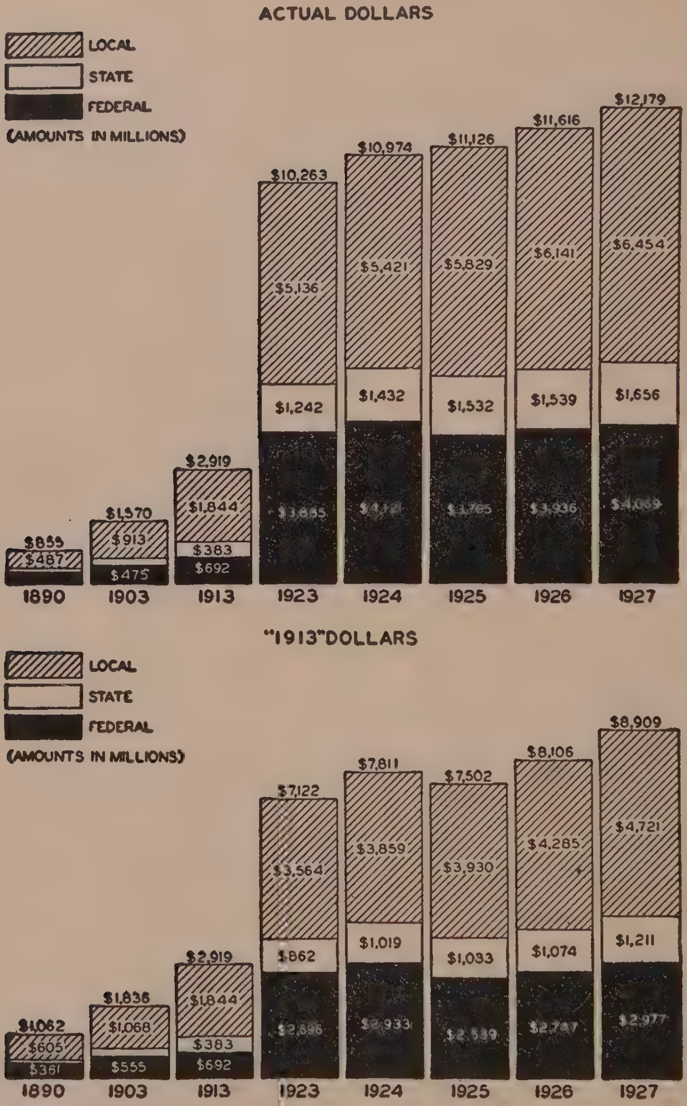
[1] Cost of Government in the United States, 1925–1928, National Industrial Conference Board, New York, 1928, p. 33.



Combined gross governmental expenditures. (Courtesy National Industrial Conference Board.)

about. We are asking more service from governments and so must pay more in the way of taxes.

The following table shows the increase in the number of independent Federal bureaus and illustrates in an interesting way the multiplied functions of government.

FEDERAL BUREAUS AND COMMISSIONS, 1913 AND 1929.

On June 30, 1913, There Were Six First-Class Independent Federal Bureaus and Commissions in Existence at Washington. They Were:[2]	By 1929, the Number of First-Class Independent Bureaus Had Increased and Were as Follows:[2]
The Interstate Commerce Commission	Alien Property Custodian
The Civil Service Commission	Alaska Relief
The Smithsonian Institution	Battle Monuments Commission
The National Museum	Arlington Bridge Commission
The Perry's Victory Memorial Commission	Board of Tax Appeals
The Commission of Fine Arts	Bureau of Efficiency
	Civil Service Commission
	Commission of Fine Arts
	Employees' Compensation
	Board for Vocational Education
	Federal Oil Conservation Board
	Federal Power Commission
	Federal Reserve Board
	Federal Trade Commission
	General Accounting Office
	Housing Corporation
	Interstate Commerce Commission
	Committee for Aëronautics
	Perry's Victory Commission
	Railroad Administration
	Smithsonian Institution
	National Museum
	Washington Buildings and Parks
	U. S. Shipping Board
	U. S. Tariff Commission
	U. S. Veterans' Bureau
	Fed. Farm Loan Board
	Fed. Farm Board
	Fed. Radio Commission
	Fed. Narcotics Control Board
	Nat. Screw Thread Commission
	Fed. Personnel Classification Board
	War Claims Arbiter

It may be that the government is giving some services which might better be rendered by individuals or private concerns. But also there may be many services, such as transportation or the mining of coal which might better be conducted under government supervision. These would raise the total of expenditures, but the increase in welfare to citizens might be sufficiently greater to justify it. Indeed it is the opinion of most students of politics that the government does too little rather than too much. It must not be forgot that ours is an economic system which grows more complex and therefore more difficult to control in the public interest; and that with increases in population, particularly urban population, and with rises in the general standard of living, the tendency must always be toward greater protection for individuals and greater services for the group. And these come most effectively from governmental agencies just because the government is a general organization, common to all groups, all industries, all consumers. Theoretically, at least, it favors none and serves all. No private organization can attain quite the same status.

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[2] In addition there are a few scattering small commissions.

4. *Receipts*

In order to have the necessary funds with which to carry on these numerous activities there must be a regular and well-devised revenue system.

SOURCES AND AMOUNTS OF REVENUE

Of Federal, State, and Local Governments

Taxes	*Federal*	*State*	*Local*[1]	*Total*
Taxes: On income	$1,761,659,049	$27,535,105	$72,160,017	$1,861,354,171
On general property	....	358,601,933	3,514,479,150	3,873,081,083
On business	247,258,938	336,519,287	182,747,169	766,525,394
On consumption	425,519,635	286,063,504	34,421,963	754,821,309
On privilege	46,068,399	12,874,376	61,980,000	112,106,568
On inheritances	108,939,896	85,894,069	3,732,984	198,566,949
Customs duties	548,521,795	....	....	548,521,795
Assessments for benefits and services	24,637,944	31,175,676	405,564,229	461,377,849
Fines and forfeits	11,864,378	7,314,116	39,082,153	58,260,647
Subventions and gifts	6,366,351	129,496,200	237,291,651	373,154,202
Trust funds	83,839,655	13,995,479	42,688,879	140,524,013
Rent	10,530,290	11,044,051	47,148,963	68,723,304
Interest	178,137,149	55,900,452	162,255,746	396,293,347
Sale of property	218,045,281	....	....	218,045,281
Earnings of departments	55,693,163	118,731,659	146,803,831	321,228,653
Earnings of public service enterprises	24,908,525	10,096,333	567,036,199	602,041,057
Miscellaneous receipts	29,345,505	....	....	29,345,505
Totals	$3,781,335,953	$1,485,242,240	$5,517,392,934[1]	10,783,971,127

[1] Local government revenues estimated.

This table, prepared especially for Nation's Business, represents the first compilation of data covering federal, state and local governments that has ever been assembled in related form. Numerous and authentic sources were studied in its preparation

(From *Nation's Business*, January, 1928.)

Do governments create money, or do they merely collect certain funds from the individuals or the groups represented in the national, the state, or the local governments, and, by furnishing certain services, return a *quid pro quo?* Obviously the latter, when they are well managed. They do create money, it is true, but the penalties of creating more than their collections warrant are so certain and drastic that they cannot be long continued.[3]

Let us consider some of the revenues of government. Certain publicly owned businesses, such as the United States Post Office and the Panama Canal, are conducted by the Federal government, and these may or may not show a net gain at the end of any given year. There are numerous state and local industries of a similar nature, such as the New York State Barge Canal, the Los Angeles Water System, and the New Orleans terminal grain elevators. Not many of these, however, show a net gain at the end of a fiscal period. Often they show a loss. But any gain goes into the government treasury. This is never a very important source of revenue; and perhaps it ought not to be, since if there were net profits, the charges would better be cut down. The test of a public business is the service it renders rather than the profit it earns.

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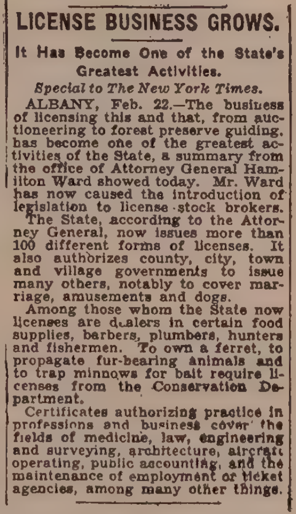
[3] The experience of European countries just after the war, when "inflation" took place —which is the simple printing of paper money to pay obligations with—is a lasting object lesson to our generation.



LICENSE BUSINESS GROWS.

It Has Become One of the State's Greatest Activities.

Special to The New York Times.

ALBANY, Feb. 22.—The business of licensing this and that, from auctioneering to forest preserve guiding, has become one of the greatest activities of the State, a summary from the office of Attorney General Hamilton Ward showed today. Mr. Ward has now caused the introduction of legislation to license stock brokers.

The State, according to the Attorney General, now issues more than 100 different forms of licenses. It also authorizes county, city, town and village governments to issue many others, notably to cover marriage, amusements and dogs.

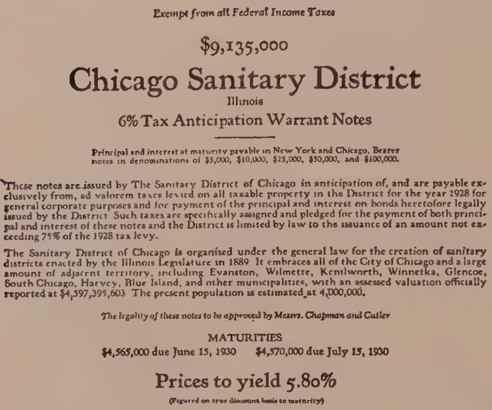
Among those whom the State now licenses are dealers in certain food supplies, barbers, plumbers, hunters and fishermen. To own a ferret, to propagate fur-bearing animals and to trap minnows for bait require licenses from the Conservation Department.

Certificates authorizing practice in professions and business cover the fields of medicine, law, engineering and surveying, architecture, aircraft operating, public accounting, and the maintenance of employment or ticket agencies, among many other things.

This excerpt gives an interesting picture of the range of the government's licensing powers. (From *N. Y. Times*, February 23, 1930.)

The Federal government is the owner of large areas of land, the so-called "public domain," particularly in the West. This public domain includes agricultural and grazing lands; also vast amounts of timber, mineral deposits of one sort and another, and water-power resources. On some of these there is no attempt to make a profit; such was the policy adopted toward that part of the domain which might in time become agricultural land. Much of it was given away and the rest was sold cheaply to bring it quickly into use. Recently, in an endeavor to conserve rather than to obtain a net return, the government has maintained a closer control over such mineral deposits as coal and petroleum, and has instituted the national Forest Reserve system for the conservation of our remaining timber resources. Not much revenue, therefore, can be expected from any of the government's activities.

There are certain fees and special assessments which a government may levy. When it grants a patent, it gives the grantee a monopoly on that patent for a certain period of years. For this special benefit, the inventor is charged a fee. In order to protect the public health, a city may find it necessary to regulate certain occupations, such as restaurants and bakeries. The municipality usually charges a license fee to help cover the cost of regulation. Similar license fees are also collected from drivers and owners of automobiles, places of amusement, physicians, and druggists. Special assessments are a particular kind of fee imposed when one receives a special benefit from an improvement to property. The paving of a street, the laying of a sewer or water main, benefits the entire city but has a more immediate effect in increasing property values along that particular street. Therefore a special assessment is levied by the city upon the owners of the property thus affected. Aside from these revenues governments may also resort to borrowing (by selling bonds) to meet the expenses of unusual situations such as a war. It would be difficult for the Federal government to meet such an expense out of ordinary revenues. State and local governments also borrow frequently in order to obtain money to build new bridges, water-supply systems, or other such improvements. Future revenues during the service of the improvement are expected to meet the interest on the bonds and to repay the principal.



Exempt from all Federal Income Taxes

$9,135,000

Chicago Sanitary District

Illinois

6% Tax Anticipation Warrant Notes

Principal and interest at maturity payable in New York and Chicago. Bearer notes in denominations of $5,000, $10,000, $25,000, $50,000, and $100,000.

These notes are issued by The Sanitary District of Chicago in anticipation of, and are payable exclusively from, ad valorem taxes levied on all taxable property in the District for the year 1928 for general corporate purposes and for payment of the principal and interest on bonds heretofore legally issued by the District Such taxes are specifically assigned and pledged for the payment of both principal and interest of these notes and the District is limited by law to the issuance of an amount not exceeding 75% of the 1928 tax levy.

The Sanitary District of Chicago is organized under the general law for the creation of sanitary districts enacted by the Illinois Legislature in 1889 It embraces all of the City of Chicago and a large amount of adjacent territory, including Evanston, Wilmette, Kenilworth, Winnetka, Glencoe, South Chicago, Harvey, Blue Island, and other municipalities, with an assessed valuation officially reported at $4,597,395,603 The present population is estimated at 4,000,000.

The legality of these notes to be approved by Messrs. Chapman and Cutler

MATURITIES

$4,565,000 due June 15, 1930 $4,570,000 due July 15, 1930

Prices to yield 5.80%

(Figured on true discount basis to maturity)

One method by which governments obtain funds for carrying on their many activities: an issue of municipal bonds advertised for sale. (From the *N. Y. Times*, May 15, 1929.)

But by far the largest source of revenue is taxes. In accepting the Constitution, the citizens of the colonies granted certain taxing powers to the several governments: national, state, and local. Certain previously determined services are performed for its citizens by these various governments and in turn they are required to pay for these services through taxes levied largely upon incomes, or upon real and personal property.

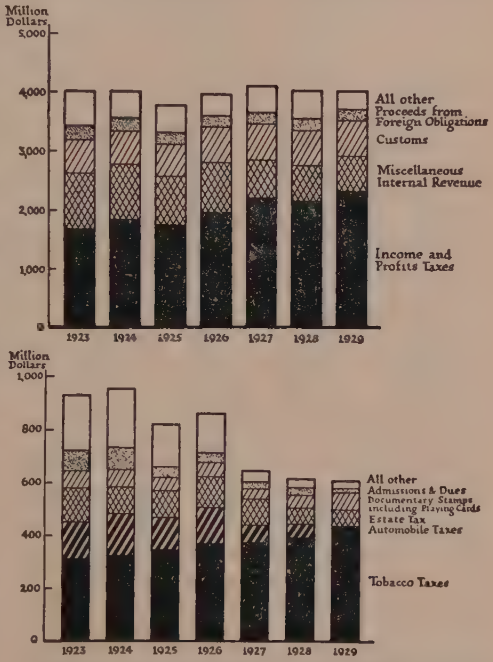
There are certain fundamental rules governing the imposition of taxes which should be noted immediately. They were stated by Adam Smith and are still widely accepted:

1. The subjects of every state ought to contribute to the support of the government as nearly as possible in proportion to their respective abilities.
2. The tax which each individual is forced to pay ought to be certain and not arbitrary. The time of payment, the manner of payment, the quantity to be paid, ought to be explicit and plain to the contributor and to every other person.
3. Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it.
4. Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state.[4]

[4] *Wealth of Nations*, Book V, Chapter II.

These might be summarized by the four words, *ability*, *certainty*, *convenience*, and *economy*.

The method of determining the amount each citizen should contribute to the maintenance of his government has given rise to endless controversy. Should the tax be levied on the basis of the cost of performing the service, *i.e.*, should the individual contribute in accordance with the expense or cost which the government incurs in his behalf? Or should his tax be levied with regard to the benefits which he receives from his government? Or should he be taxed according to his ability to pay? It can be readily seen that there are large numbers of people today who could not contribute according to the benefits which they receive. The measuring of benefits or of proportioning the costs of these benefits would be a difficult task. The canons of cost and benefit, therefore, are not now feasible as distinct methods of establishing a basis for taxation. The modern tendency has been to impose a tax according to ability to pay. Thus the man who has an annual income of two hundred thousand dollars pays more than the workman who has an income of two thousand dollars. In practice the tax on income is graduated upward, not proportionally but progressively, as shown by the table on page 602. This merely means that the ability to pay taxes is conceived to increase at a faster rate than that of income or wealth.



An idea of the proportion of the Federal government's income which comes from taxes may be obtained from the above charts. The upper one shows sources of miscellaneous internal revenue; the lower, sources of ordinary receipts. (From *N. Y. Times*, December 5, 1930.)

There are many different forms of taxes used by modern governments, the more important of which are (a) the property tax, (b) the income tax, (c) the inheritance tax, (d) certain business taxes, (e) the poll tax, (f) excises and customs. Of these the income and the property taxes are the most important sources of revenue.

The Federal income tax is a progressive tax imposed upon all who receive income from within the United States.[5] It may be levied against personal and corporate incomes. Being a direct tax its burden cannot very well be shifted from one individual to another. It consists of two parts (a) the normal tax and (b) the surtax. The normal tax under the 1928 law, for instance, is 1½ per cent on the first $4,000 of net income, 3 per cent on the next $4,000 and 5 per cent on all above $8,000. The surtaxes[6] apply only to incomes of over $10,000. The rates begin at 1 per cent and rise to 40 per cent on net incomes in excess of $500,000.[7]

MARRIED MAN, NO DEPENDENTS.

Total Net Income.	Normal Tax Present Law.	Normal Tax Proposed for 1929.	Surtax.	Total Tax Present Law.	Total Tax Proposed for 1929.	Reduction in Tax. Amount.	P.C.
$4,000	$5.63	$1.88	.....	$5.63	$1.88	$3.75	66.61
5,000	16.88	5.63	.....	16 88	5.63	11.25	66.65
6,000	28.13	9.38	.....	28.13	9.38	18.75	66.65
7,000	39.38	13.13	.....	39.38	13.13	26.25	66.66
8,000	56.25	22.50	.....	56.25	22.50	33.75	60.00
9,000	78.75	37.50	.....	78.75	37.50	41.25	52.38
10,000	101.25	52.50	.....	101.25	52.50	48.75	48.15
15,000	311.88	216.25	$56.88	368.76	273.13	95.63	25.93
20,000	547.50	405.00	213.75	761.25	618.75	142.50	18.72
25,000	781.88	592.50	500.63	1,282.51	1,093.13	189.38	14.77
30,000	1,016.25	780 00	865 00	1,881.25	1,645 00	236.25	12.56
40,000	1,485.00	1,155.00	1,768.75	3,253.75	2,923.75	320.00	10.14
50,000	1,953.75	1,530.00	2,925.00	4,878.75	4,455.00	423.75	8.69
60,000	2,422.50	1,905.00	4,312.50	6,735.00	6,217.50	517.50	7.63
70,000	2,891.25	2,280.00	5,332.50	8,823.75	8,212.50	611.25	6.93
80,000	3,360.00	2,655.00	7,688.75	11,048.75	10,343.75	705.00	6.38
90,000	3,828.75	3,030.00	9,540.00	13,368.75	12,570.00	798.75	5.97
100,000	4,328.75	3,430.00	11,440.00	15,768.75	14,870.00	898.75	5.70
250,000	11,828.75	9,430.00	41,440 00	53,268.75	50,870.00	2,398.75	4.50
500,000	24,328.75	19,430.00	91,440 00	115,768.75	110,870.00	4,898.75	4.23
1,000,000	49,328.75	39,430.00	191,440.00	240,768.75	230,870.00	9,898.75	4.11

A change in income tax rates is explained by the Treasury Department. The tables show a comparison of the total tax payable under the present law and under the new rates suggested upon a single person and upon a married person without dependents. It is assumed that all income not in excess of $10,000 is earned income, and, in addition, that one-fourth of the income in excess of $10,000, until the limit of $30,000 earned income is reached, is also earned. The total net income is assumed to be all the income received, and the comparison does not include income in part consisting of dividends or capital gains or interest upon governmental bonds. The comparison covers the total tax, normal and surtax. The normal tax rates suggested are one-half of 1 per cent on the first $4,000 taxable, 2 per cent on the next $4,000, and 4 per cent on the remainder of the taxable net income. (From *N. Y. Times*, December 5, 1929.)

On the whole the income tax measures up as well as any to the four tests we have mentioned. Its flexibility is also rather notable in contrast with other kinds of taxes: which means that by its use the taxing authority can fit its income to its needs with relative quickness and certainty. And these, from a technical point of view, are important.

The general property tax has been of great importance in the tax system of state and local governments.[8] These monopolize its use; the nation, as we have seen, depends on other sources. No two states have exactly the same system of levying it, but the general plan is much the same everywhere. It is supposed to be levied against all property, real and personal, tangible and intangible. In practice it has come to be largely a tax upon real property. With the development of the corporate form of business enterprise, its administration has become more complicated. It is usually administered by local governments in the following way:

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[5] Certain states such as New York and Massachusetts also use the income tax.

[6] The surtaxes are in addition to and are not to be substituted for the normal tax. Thus an income of $15,000 would pay a normal tax on $15,000 plus a surtax on the amount in excess of $10,000.

[7] In 1918 the normal tax was 12 per cent and the surtaxes ran as high as 65 per cent on the highest incomes.

[8] Over 30 per cent of the revenues of our forty-eight states is derived from the general property tax, and a much greater proportion of local revenues come, of course, from this source.

Individual Returns by Years with Total Net Incomes

Year.	Number of returns Total.	 Taxable.	 Non-taxable.	Per cent of total. Taxable.	 Non-taxable.	Net income.
1913	357,598	....	....	..	..	[2]$3,900,000,000
1914	357,515	....	....	..	..	4,000,000,000
1915	336,652	....	....	..	..	4,600,000,000
1916	437,036	362,970	74,066	83	17	6,300,000,000
1917	3,472,890	2,707,234	765,656	78	22	13,700,000,000
1918	4,425,114	3,392,863	1,032,251	77	23	16,000,000,000
1919	5,332,760	4,231,181	1,101,579	79	21	19,900,000,000
1920	7,259,944	5,518,310	1,741,634	76	24	23,700,000,000
1921	6,662,176	3,589,985	3,072,191	54	46	19,600,000,000
1922	6,787,481	3,681,249	3,106,232	54	46	21,400,000,000
1923	7,698,321	4,270,121	3,428,200	55	45	24,800,000,000
1924	7,369,788	4,489,698	2,880,090	61	39	25,700,000,000
1925	4,171,051	2,501,166	1,669,885	60	40	21,900,000,000
1926	4,138,092	2,470,990	1,667,102	60	40	21,960,000,000
1927	4,101,547	2,440,941	1,660,606	59	41	22,545,000,000
1928 (filed to Aug. 31, 1929)	4,050,959	2,434,640	1,616,319	60	40	24,625,000,000

[1] Fiscal year returns included. The minimum income for which a return is required has varied under the different revenue acts, thus affecting the number of returns. The changes in provisions for filing returns are shown on p. 3.

[2] Estimated on the basis of the number of returns filed and the average net income in each class.

This table shows that in 1928, 2,434,640 incomes were taxed and that these incomes totaled $24,625,000,000. There have been interesting changes in the last fifteen years. (From *N. Y. Times*, February 3, 1930.)

1. Tax assessors make up lists of all persons residing in the towns giving the total value of each person's property.
2. The town officers decide on the amount of income necessary for expenditures and a rate is then determined which will yield this amount. These rates are stated as so many mills per dollar.
3. The tax is paid to the town treasurer.

There are certain defects of the general property tax which have evoked much criticism. First of all it has become largely a tax on real estate because this is property which cannot be conveniently hidden or undervalued. This leaves an unfair burden on real estate and other tangible property. Intangible property: such as money, notes, bonds, stocks, etc., manage to escape the tax burden to a surprising degree. And as intangible property has come to be so important, especially in business enterprise, this defect is important. A duplication arises from the fact that bonds and stocks may be taxed as well as the real property which they represent. This is made especially difficult by the lack of coördination among the several states in regard to the administration of the tax on interstate property, such as that of corporations with the actual plant located in one state and the certificates of ownership held in other states. These difficulties we shall have to pass over with mere mention.

There are several business taxes which are levied by the several states and by the Federal government. These include among others:

1. Corporation taxes—levied upon corporation earnings, gross or net. This has replaced the property tax upon corporation property in many states.
2. Excises or internal taxes—levied on the sale or manufacture of certain commodities.
3. Customs—levied upon commodities as they enter or leave the country.

Also certain general taxes such as:

1. Inheritance taxes—levied upon estates before they can be transferred to heirs.
2. Certain consumption taxes, such as those on gasoline, theater tickets, tobacco, etc.

Governments differ from most businesses in being able to determine their possible expenses first and then securing revenue to meet these expenses. A corporation may estimate its expense in advance but must keep within very definite limits if it expects to continue long as a going concern. Good government also requires that there be a proper coördination between expenditures and receipts. This is best brought about through the use of the fiscal budget. The budget is merely an estimate of the necessary expenses for an ensuing period. It serves as a guide to those responsible for the fiscal policies of governments and, by giving more publicity, offers an added check upon unnecessary expenditures. We have been decidedly negligent in America, in all of our governments, about the use of the budget. Certain city administrations are especially notorious for the waste of public funds intrusted to their care.

In summary, then, we can say that the government may, and in a great number of ways does, contribute to higher levels of living. Certain services can be rendered more effectively and efficiently by government than by individuals or corporations. There are some much needed services which private initiative will not attempt, and so must be done for society by public agencies. If we are to have more services rendered collectively, then of necessity we must submit to heavier tax burdens. Few doubt that this tendency to intrust more and more functions to government will continue to increase. It will be of no avail to yearn for the "good old days." We should recognize the advantages of this new trend and turn our energy toward shaping a government which will contribute more uniformly and justly to our welfare. These considerations, also, will doubtless become more important as time passes. Industry tends to escape from local controls and it becomes clearer all the time that the only agency sufficiently wide in scope to compass its control is the Federal government. Any considerable constructive control still lies in the future. The rôle of government as yet is still, with us, confined to the relatively few protective services we have named. But the trend is doubtless toward the enlargement of central authority. It is increasingly necessary therefore that a critical interest should be taken by citizens everywhere in its efficient administration and in the broad policies which shape its sphere of authority and functioning; so that as its duties are enlarged they may be performed under intelligent public scrutiny.

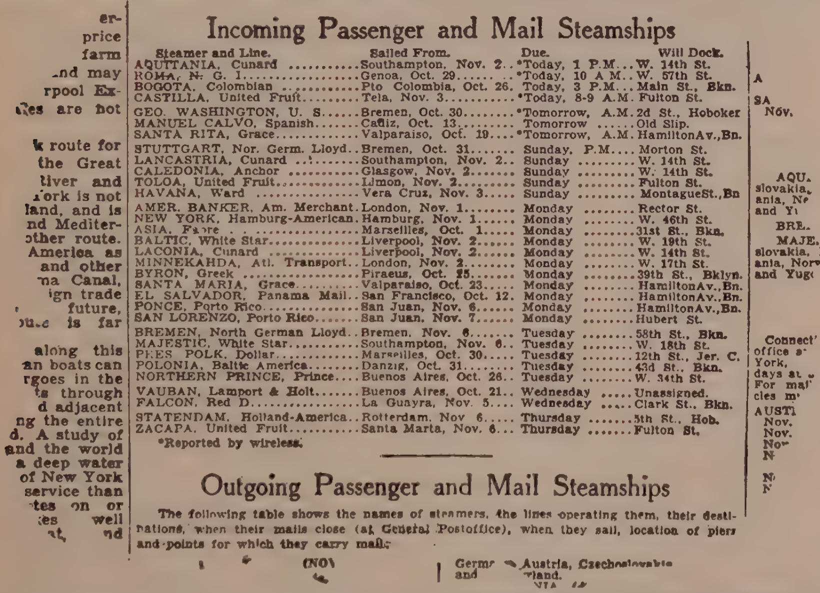
PART VI

RAISING THE LEVELS OF LIVING THROUGH INTERNATIONAL COÖPERATION

ECONOMIC INEQUALITIES AMONG NATIONS

1. *International Trade*

We all of us know well enough that scores of ships move out daily from our harbors along the Atlantic and Pacific coasts and the coast of the Gulf of Mexico; we know, too, that every day other scores come in. We are aware of the activity at the docks and in the warehouses. But we seldom stop to trace back to their beginnings these constant streams of commerce, nor to question why such a movement exists at all. And indeed there is no more reason why we should inquire into it than into the reasons for the loaded trains of freight which pass backward and forward between Chicago and St. Louis, or the ships which go down from Duluth to Cleveland or Buffalo—except that the commerce which goes out from our harbors happens



Incoming Passenger and Mail Steamships

Steamer and Line.	Sailed From.	Due.	Will Dock.
AQUITANIA, Cunard	Southampton, Nov. 2	*Today, 1 P.M.	W. 14th St.
ROMA, N. G. I.	Genoa, Oct. 29	*Today, 10 A.M.	W. 57th St.
BOGOTA, Colombian	Pto Colombia, Oct. 26.	Today, 3 P.M.	Main St., Bkn.
CASTILLA, United Fruit	Tela, Nov. 3	*Today, 8-9 A.M.	Fulton St.
GEO. WASHINGTON, U. S.	Bremen, Oct. 30	*Tomorrow, A.M.	2d St., Hoboken
MANUEL CALVO, Spanish	Cadiz, Oct. 13	Tomorrow	Old Slip.
SANTA RITA, Grace	Valparaiso, Oct. 19	*Tomorrow, A.M.	HamiltonAv.,Bn.
STUTTGART, Nor. Germ. Lloyd	Bremen, Oct. 31	Sunday, P.M.	Morton St.
LANCASTRIA, Cunard	Southampton, Nov. 2	Sunday	W. 14th St.
CALEDONIA, Anchor	Glasgow, Nov. 2	Sunday	W. 14th St.
TOLOA, United Fruit	Limon, Nov. 2	Sunday	Fulton St.
HAVANA, Ward	Vera Cruz, Nov. 3	Sunday	MontagueSt.,Bn
AMER. BANKER, Am. Merchant	London, Nov. 1	Monday	Rector St.
NEW YORK, Hamburg-American	Hamburg, Nov. 1	Monday	W. 46th St.
ASIA, Fabre	Marseilles, Oct. 1	Monday	31st St., Bkn.
BALTIC, White Star	Liverpool, Nov. 2	Monday	W. 19th St.
LACONIA, Cunard	Liverpool, Nov. 2	Monday	W. 14th St.
MINNEKAHDA, Atl. Transport	London, Nov. 2	Monday	W. 17th St.
BYRON, Greek	Piraeus, Oct. 25	Monday	39th St., Bklyn.
SANTA MARIA, Grace	Valparaiso, Oct. 23	Monday	HamiltonAv.,Bn.
EL SALVADOR, Panama Mail	San Francisco, Oct. 12.	Monday	HamiltonAv.,Bn.
PONCE, Porto Rico	San Juan, Nov. 6	Monday	HamiltonAv.,Bn.
SAN LORENZO, Porto Rico	San Juan, Nov. 7	Monday	Hubert St.
BREMEN, North German Lloyd	Bremen, Nov. 6	Tuesday	58th St., Bkn.
MAJESTIC, White Star	Southampton, Nov. 6	Tuesday	W. 18th St.
PRES POLK, Dollar	Marseilles, Oct. 30	Tuesday	12th St., Jer. C.
POLONIA, Baltic America	Danzig, Oct. 31	Tuesday	43d St., Bkn.
NORTHERN PRINCE, Prince	Buenos Aires, Oct. 26	Tuesday	W. 34th St.
VAUBAN, Lamport & Holt	Buenos Aires, Oct. 21	Wednesday	Unassigned.
FALCON, Red D	La Guayra, Nov. 5	Wednesday	Clark St., Bkn.
STATENDAM, Holland-America	Rotterdam, Nov 6	Thursday	5th St., Hob.
ZACAPA, United Fruit	Santa Marta, Nov. 6	Thursday	Fulton St.

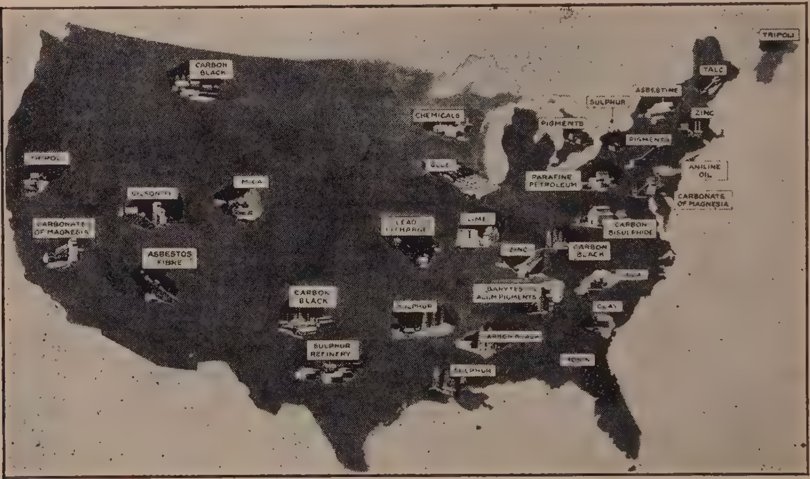
*Reported by wireless.

Outgoing Passenger and Mail Steamships

The following table shows the names of steamers, the lines operating them, their destinations, when their mails close (at General Postoffice), when they sail, location of piers and points for which they carry mail:

The progress of ships moving toward the port of New York is, thanks to wireless, reported accurately in the daily press. This list of important ships expected in one port in a single week furnishes an idea of the volume of our ocean commerce. (From *N. Y. Times*, November 8, 1929.)

to cross certain imaginary lines which mark off nations from one another. Iron ore is not mined everywhere; citrus fruits grow only in certain places; clothing is made in certain places. When all these happen to be within a nation's boundaries, their exchange gives rise to no special problems. When, however, national boundaries are crossed certain problems do arise. For different nations have different laws governing industry and trade, different systems of currency, and different ideas as to the advantages of trading with one another. For these reasons the fact of separateness among nations gives rise to certain economic issues which affect the levels of living of all people, Americans included.



Everything for tires but rubber—even our great range does not extend to tropical products. This is perhaps our greatest lack; perhaps it explains our strained relations with some southern neighbors. (Courtesy Goodyear Rubber Company.)

America happens to be favorably situated in this respect. We have the widest territory unhampered by trade restrictions which exists in the whole world.[1] We have a wide range of soils and climates and consequently we are able to grow many different crops. We have a great variety of mineral resources and a plenitude of power. And we are the most advanced region of the earth in the development of the industrial arts. All these have contributed to give us the highest levels of living of any people. But, just as we said that these levels may be made even higher by producing more efficiently, by apportioning our income more justly, and by using goods more wisely, so we may make them higher by arranging our relations with other nations more peaceably. For, favored as we are, there are still many things we do not have and which we must depend on the people of other nations to send us; and we find it possible to produce many things in such abundance that we can send these back in payment. If we are to get these things and to send back our goods in payment, the paths of trade must be kept open and free. Barriers are costly to surmount.

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[1] Except Russia, if all the Federated Soviet Republics are included. But, of course, Russia has as yet not reached our level of industrial and commercial development.

2. *Exports and Imports*

It may be interesting to look for a moment at a list of the most important goods we export and import. This will give us, to begin with, some notion of our dependency on others and their dependency on us. Here, then, are the twenty leading imports and exports for the year 1928:

TWENTY MOST VALUABLE IMPORTS AND EXPORTS OF THE UNITED STATES [2]
(1928)

EXPORTS Commodity and Rank *	IMPORTS Commodity and Rank *
1. Unmanufactured cotton (18.3%)	1. Raw silk (9.0%)
2. Automobiles, parts, and accessories, except tires (9.9%)	2. Coffee (7.6%)
3. Gasoline, naphtha, and other light products (4.6%)	3. Crude rubber, including latex (6.0%)
4. Leaf tobacco (3.1%)	4. Cane sugar (5.1%)
5. Refined copper ingots, bars, and other forms (2.8%)	5. Rawhides and skins, except furs (3.7%)
6. Wheat (2.4%)	6. Standard newsprint paper (3.4%)
7. Agricultural machinery and implements (2.3%)	7. Dressed and undressed furs (2.8%)
8. Coal and coke (2.0%)	8. Crude petroleum (2.2%)
9. Lard (2.0%)	9. Tin bars, blocks, pigs, etc. (2.1%)
10. Illuminating oil (1.9%)	10. Wood pulp (2.0%)
11. Lubricating oil (1.8%)	11. Burlaps (2.0%)
12. Boards, planks, and scantlings (1.8%)	12. Unmanufactured wool (2.0%)
13. Cotton cloth, including duck and tire fabric (1.6%)	13. Unrefined, black, blister, and converter copper (1.7%)
14. Iron and steel plates, sheets, skelp and strips (1.5%)	14. Art works (1.6%)
15. Wheat flour (1.5%)	15. Diamonds, including industrial (1.4%)
16. Leather (1.1%)	16. Unmanufactured tobacco (1.3%)
17. Gas and fuel oil	17. Cocoa, or cacao, beans (1.2%)
18. Barley	18. Leather (1.1%)
19. Undressed and dressed furs	19. Unmanufactured cotton (1.0%)
20. Automobile tires	20. Boards, planks, and deals (1.0%)

* Figure in parentheses after name of commodity indicates percentage of total value of exports and imports.

Some of these are raw materials, some are finished goods; some are necessities, some are luxuries. The total combined value of merchandise exports and imports in 1928 was slightly more than 9 billions of dollars. It will be seen that we are the kind of a region which, just now, is in a state of transition from a country which has only raw products to send out and which brings in only manufactured ones, to a country which brings in mostly raw materials and sends out mostly finished goods. We are, so to speak, in a halfway situation between that of the United Kingdom and that of such a country, for instance, as Brazil.

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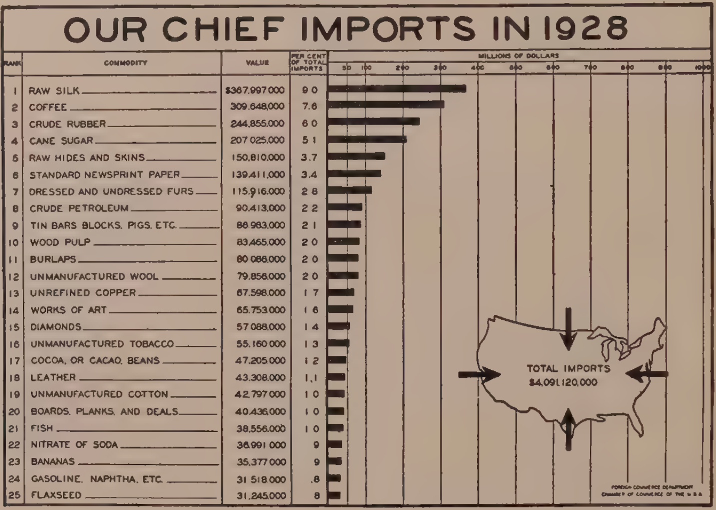
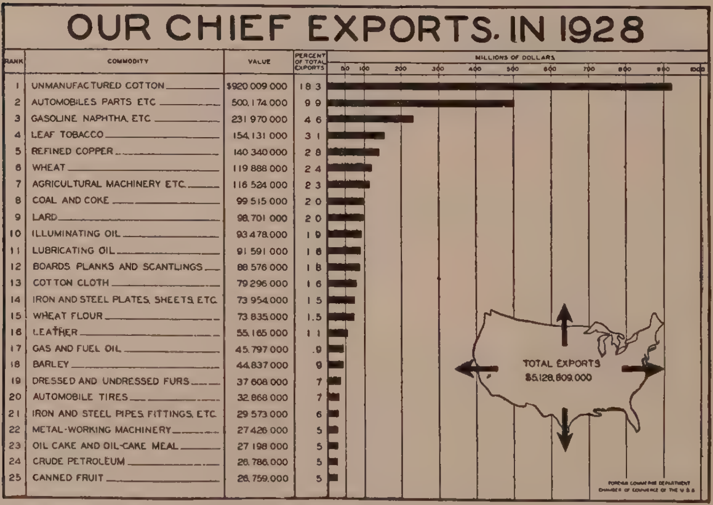
[2] *Our World Trade in 1928*, U. S. Chamber of Commerce, 1929.


OUR CHIEF IMPORTS IN 1928

RANK	COMMODITY	VALUE	PER CENT OF TOTAL IMPORTS
1	RAW SILK	$367.997 000	9 0
2	COFFEE	309.648,000	7.6
3	CRUDE RUBBER	244.855.000	6 0
4	CANE SUGAR	207 025.000	5 1
5	RAW HIDES AND SKINS	150,810.000	3.7
6	STANDARD NEWSPRINT PAPER	139.411,000	3.4
7	DRESSED AND UNDRESSED FURS	115.916.000	2 8
8	CRUDE PETROLEUM	90.413.000	2 2
9	TIN BARS BLOCKS, PIGS, ETC.	86 983.000	2 1
10	WOOD PULP	83.465.000	2 0
11	BURLAPS	80 086.000	2 0
12	UNMANUFACTURED WOOL	79.856.000	2 0
13	UNREFINED COPPER	67.598.000	1 7
14	WORKS OF ART	65.753 000	1 6
15	DIAMONDS	57 088.000	1 4
16	UNMANUFACTURED TOBACCO	55.160 000	1 3
17	COCOA, OR CACAO, BEANS	47.205 000	1 2
18	LEATHER	43.308.000	1.1
19	UNMANUFACTURED COTTON	42.797 000	1 0
20	BOARDS, PLANKS, AND DEALS	40.436.000	1 0
21	FISH	38.556.000	1 0
22	NITRATE OF SODA	36.991 000	9
23	BANANAS	35.377 000	9
24	GASOLINE, NAPHTHA, ETC.	31 518.000	.8
25	FLAXSEED	31.245.000	8


OUR CHIEF EXPORTS. IN 1928

RANK	COMMODITY	VALUE	PERCENT OF TOTAL EXPORTS
1	UNMANUFACTURED COTTON	$920 009 000	18 3
2	AUTOMOBILES PARTS ETC	500,174 000	9 9
3	GASOLINE NAPHTHA, ETC	231 970 000	4 6
4	LEAF TOBACCO	154,131 000	3 1
5	REFINED COPPER	140 340 000	2 8
6	WHEAT	119 888 000	2 4
7	AGRICULTURAL MACHINERY ETC.	116 524 000	2 3
8	COAL AND COKE	99 515 000	2 0
9	LARD	98.701 000	2 0
10	ILLUMINATING OIL	93 478.000	1 9
11	LUBRICATING OIL	91 591 000	1 8
12	BOARDS PLANKS AND SCANTLINGS	88.576 000	1 8
13	COTTON CLOTH	79 296 000	1 6
14	IRON AND STEEL PLATES, SHEETS, ETC	73 954 000	1 5
15	WHEAT FLOUR	73 835.000	1.5
16	LEATHER	55,165 000	1 1
17	GAS AND FUEL OIL	45.797 000	.9
18	BARLEY	44.837 000	9
19	DRESSED AND UNDRESSED FURS	37 608 000	7
20	AUTOMOBILE TIRES	32 868 000	7
21	IRON AND STEEL PIPES FITTINGS, ETC	29 573 000	6
22	METAL-WORKING MACHINERY	27 426 000	5
23	OIL CAKE AND OIL-CAKE MEAL	27 198 000	5
24	CRUDE PETROLEUM	26.786.000	5
25	CANNED FRUIT	26.759.000	5

(Courtesy Chamber of Commerce of the U. S. A.)

Following, there is such a list also for the United Kingdom which shows her bringing in raw materials and foodstuffs and sending out manufactured goods. She has become a workshop:

TWENTY MOST VALUABLE IMPORTS AND EXPORTS OF THE UNITED KINGDOM
(1925)

Imports	Exports
1. Cotton	Cotton piece goods
2. Meat	Iron and steel
3. Wheat	Machinery
4. Wheat flour	Electrical goods
5. Sheep's wool	Coal
6. Butter	Coke
7. Lumber	Woolen cloth
8. Copper and lead	Worsted cloth
9. Tea	Cotton yarn
10. Sugar	Nonferrous metals
11. Fruit	Chemicals
12. Mineral oils	Clothing
13. Oil seeds	Wool
14. Crude rubber	Wool tops
15. Iron and steel	Paper
16. Hides and skins	Spirits
17. Flax, hemp, jute	Worsted yarn
18. Eggs	Automobiles
19. Cattle for food	Manufactured tobacco
20. Cheese	Linen piece goods

Brazil, on the other hand, sends out nothing but raw materials; and although she has to bring in many foodstuffs because of the nature of her territory, most of her imports are finished goods, made up, partly, out of her own materials, in England, Germany, or the United States.

ELEVEN MOST VALUABLE IMPORTS AND EXPORTS OF BRAZIL
(1927)

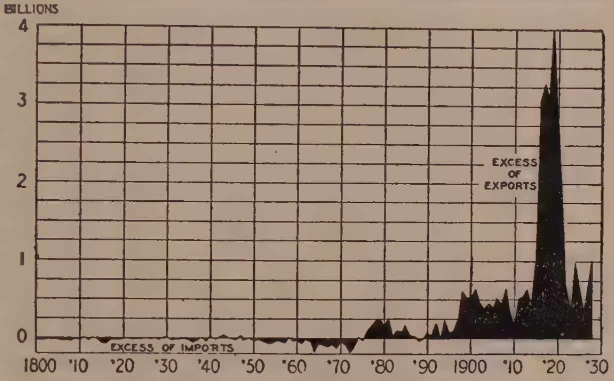
Imports	Exports
1. Machinery	Coffee
2. Wheat	Cacao beans
3. Cotton piece goods	Hides and skins
4. Automobiles	Matte
5. Wheat flour	Crude rubber
6. Gasoline	Raw tobacco
7. Chemicals and drugs	Oil seeds
8. Codfish	Sugar
9. Iron and steel	Raw cotton
10. Paper and manufactures	Beef
11. Cement	Cornauba wax

These lists illustrate a number of points which are important. First, that different countries produce and send out different kinds of things; second, that the kinds of things sent out depend upon the kind of resources nature has bestowed; and third, that the kinds of things are also determined by the state of industrial advance. But none of these is the most important fact to be noted. This is the dependency of each on all. In a very real sense, it is necessary for us to have the things Brazil has to export. But we also need things which come from most other parts of the earth. Consider, for instance, the first few items on our list of imports. Rubber comes partly from Brazil, but mostly from the Far East, notably the Straits Settlements. Silk comes from China and Japan. Coffee comes from South America and Java. Sugar comes from the West Indies and Central America. And so it goes throughout the list. If we had to, possibly we *could* grow most of these, though there is a surprisingly long list of materials we lack entirely (tin, vanadium, chromium, nickel, platinum, asbestos, shellac, rope fibers, certain tropical fruits, certain vegetable oils, coffee, silk, potash, rubber, quinine, etc.) or almost entirely. But if we attempted to do it, it would be costly. It is cheaper for us to produce cotton, corn, wheat, petroleum, coal, iron, tobacco, and our other characteristic products and to exchange these for the materials others can produce more cheaply. It is even possible that our advantage in these is so great that it is cheaper for us to produce them than to try to produce some things which we could produce quite as cheaply as others can. In the process of exchanging we shall be further ahead if every region of the earth does the things and produces the materials which are, for it, the easiest and cheapest. This is sometimes called by economists the "law of comparative costs." But in order that it may work out, the lanes of trade have to be kept as free and as open as are those now, for instance, between New England and the Mississippi Valley—and for the same reasons.

Gathering latex on a Goodyear rubber plantation in Sumatra. American capital and management have, in this instance, settled on the other side of the earth to insure a supply of raw material. (Courtesy Goodyear Rubber Company.)

3. *Our Position in International Trade*

The United States Department of Commerce each year issues a report which serves as a rough casting up of international accounts. It enables us to judge, in a general way, our position in contrast with the rest of the world. During the past decade each successive report has served to emphasize certain trends, most of which, as time has gone on, have become more marked. There has been, for instance, a steady decrease in the export of raw materials such as minerals, forest products, and agricultural goods. But there has been an even more notable gain in the amount of manufactured goods exported. The time is apparently somewhat less than a generation away when we shall have ceased to be a raw material exporting nation and have become an importing one. And for these imports we shall apparently pay by the export of manufactured goods. In 1928, for instance, this situation was clear. The total volume of merchandise exchange had increased to $9,800,000,000. There was in this year a sharp falling off in the export of foodstuffs and a sharp rise in that of manufactured goods. This last was heavily influenced by automobile shipments which have, within six years, been multiplied by six.



Until 1875 our imports were more valuable than our exports. The proportions have by now been more than reversed. Note the great bulk of the excess from 1914 to 1921, when we were supplying Europe with war-goods. These were paid for in ways described in the text, and made of us a creditor rather than a debtor nation. (From *Business Bulletin*, Cleveland Trust Co., July 15, 1929.)

Another characteristic is important: the fact that what we send out is valued at more than what we bring in, leaving us a "favorable balance of trade," which is to say that we were paid more than we had to pay. That such a balance is called "favorable" is traceable to the Mercantilist notion, which was mentioned in our historical section, that it is a favorable circumstance when, at the end of any period, a nation is found to have exported goods to a greater total value than have been received, so that the balance must be discharged in money. One would think a nation poorer for having given other nations more of its goods than were returned; but in those days the uses of cash, to support rather weak thrones, were so important that it was valued more highly than other things. We no longer consciously believe this way; yet there is a tendency still to congratulate ourselves on a "favorable" balance. We put ourselves in the position of the enterprising merchant whose balance sheet shows large cash holdings. For this there is no justification. There is, in fact, no "balance" at all as we shall see later. The total amounts of exports and imports must remain equal. When an item like this occurs it means that we have perhaps loaned others the funds with which to pay us this billion of dollars. Sometimes these loans will presumably be repaid and help to turn the "balance" the other way and perhaps to limit the foreign market for our goods.

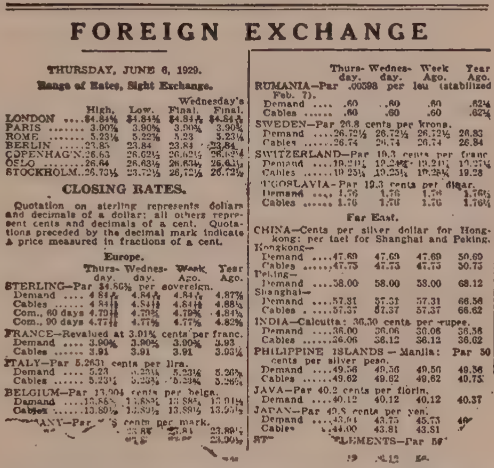
There is a very real question, in fact, whether, from a national point of view, it is so good a thing to stimulate the purchasing of our goods abroad at a rate faster than we can absorb foreign products. It raises the problem of foreign debts and makes for considerable international irritation. However this may be, our situation is such that we are rapidly increasing our foreign trade and rapidly exporting the funds which will keep the international accounts balanced. In 1928, for instance, we increased our foreign investments by an amount which, after deducting investments by foreigners here, resulted in a balance of about a billion dollars, just about enough, it will be seen, to pay for the billion-dollar surplus in the export of our goods. It might be said that we paid ourselves and presented the goods to foreigners, except, of course, that they still owe us for them and sometime will presumably make payment in goods. This payment, however, we make very difficult to achieve by keeping up exceedingly high tariff barriers which we continue to raise rather than to lower.

CHAPTER 37

TRADE AMONG NATIONS

1. *How Trade Is Carried On*

Any commodity which the people of a nation need and do not have has to come to them from the people of another nation. This is the reason for "international" trade. But these commodities will come into a nation only if they can be paid for. Paying for them consists in sending back something else in exchange or doing something which other nations are willing to pay for. It will be seen, therefore, that the trade which goes into and comes out of a nation will always have to balance in the long run. It is true that what is exchanged for goods may not always be other goods—may, in fact, be gold or may be services. But somehow there must be this equivalence of exchange. Imports must always be paid for by exports. A table showing the items of this balance for the United States follows on page 618.



FOREIGN EXCHANGE

THURSDAY, JUNE 6, 1929.

Range of Rates, Sight Exchange.

	High.	Low.	Final.	Wednesday's Final.
LONDON	$4.84¾	$4.84⅝	$4.84 11/16	$4.84 11/16
PARIS	3.90⅝	3.90⅝	3.90⅝	3.90⅝
ROME	5.23⅛	5.22⅞	5.23	5.23⅛
BERLIN	23.85	23.84	23.84	23.84
COPENHAG'N.	26.63	26.62½	26.62½	26.62½
OSLO	26.64	26.63½	26.63½	26.63½
STOCKHOLM..	26.73½	23.72½	26.72½	26.72½

CLOSING RATES.

Quotation on sterling represents dollars and decimals of a dollar; all others represent cents and decimals of a cent. Quotations preceded by the decimal mark indicate a price measured in fractions of a cent.

Europe.

	Thursday.	Wednesday.	Week Ago.	Year Ago.
STERLING—Par $4.86⅝ per sovereign.				
Demand	4.84 5/16	4.84 5/16	4.84 5/16	4.87⅞
Cables	4.84 11/16	4.84 11/16	4.84 11/16	4.88⅛
Com., 60 days	4.79 13/16	4.79⅞	4.79⅞	4.84⅛
Com., 90 days	4.77 13/16	4.77⅝	4.77⅝	4.82⅝
FRANCE—Revalued at 3.91⅛ cents per franc.				
Demand	3.90⅝	3.90⅝	3.90⅝	3.93
Cables	3.91	3.91	3.91	3.93¼
ITALY—Par 5.2631 cents per lira.				
Demand	5.23	5.23⅛	5.23⅛	5.26⅞
Cables	5.23¼	5.23⅜	5.23⅜	5.26⅞
BELGIUM—Par 13.904 cents per belga.				
Demand	13.88⅝	13.88¾	13.88¾	13.91½
Cables	13.89½	13.89½	13.89½	13.93½
[illegible]ANY—Par [illegible] cents per mark.				
[illegible]	[illegible]	23.87	23.84	23.89½
[illegible]	[illegible]	[illegible]	[illegible]	23.90½

	Thursday.	Wednesday.	Week Ago.	Year Ago.
RUMANIA—Par .00598 per leu (stabilized Feb. 7).				
Demand	.60	.60	.60	.62¼
Cables	.60	.60	.60	.62¼
SWEDEN—Par 26.8 cents per krona.				
Demand	26.72½	26.72½	26.72½	26.83
Cables	26.74	26.74	26.74	26.84
SWITZERLAND—Par 19.3 cents per franc				
Demand	19.24¼	19.24⅝	19.24¼	19.27¼
Cables	19.25¼	19.25¼	19.25¾	19.28
YUGOSLAVIA—Par 19.3 cents per dinar.				
Demand	1.76	1.76	1.76	1.76½
Cables	1.76	1.76	1.76	1.76¼

Far East.

	Thursday.	Wednesday.	Week Ago.	Year Ago.
CHINA—Cents per silver dollar for Hongkong: per tael for Shanghai and Peking.				
Hongkong—				
Demand	47.69	47.69	47.69	50.69
Cables	47.75	47.75	47.75	50.75
Peking—				
Demand	58.00	58.00	58.00	68.12
Shanghai—				
Demand	57.31	57.31	57.31	66.56
Cables	57.37	57.37	57.37	66.62
INDIA—Calcutta: 36.50 cents per rupee.				
Demand	36.00	36.06	36.06	36.56
Cables	36.06	36.12	36.12	36.62
PHILIPPINE ISLANDS—Manila: Par 50 cents per silver peso.				
Demand	49.56	49.56	49.56	49.56
Cables	49.62	49.62	49.62	49.75
JAVA—Par 40.2 cents per florin.				
Demand	40.12	40.12	40.12	40.37
JAPAN—Par 49.8 cents per yen.				
Demand	43.64	43.75	43.75	[illegible]
Cables	44.00	43.81	43.81	[illegible]
STRAITS SETTLEMENTS—Par 56[illegible]				
[illegible]	[illegible]	56.12	56[illegible]	[illegible]

Quotations for foreign currencies are published as regularly in the press as are quotations from other markets. (From *N. Y. Times*, June 7, 1929.)

A nation which has nothing to give in exchange cannot get anything back. But one which has something to give can depend upon the resources of all lands and the arts of all peoples to supply it with goods—provided tariffs do not interfere. But this trade among nations does not arrange itself. Complicated mechanisms of exchange exist which facilitate the process.

These arrangements for the settlements of debts owed, for instance, by Americans for goods brought in, or owed to Americans for goods they send out, are not made on a basis of barter any more than debts are so settled in domestic markets. There are, indeed, markets for "foreign exchange" to which an American importer can go and buy "paper" which will settle his debt abroad. He could not directly use American dollars for payment

OUR ESTIMATED CASH DEALINGS WITH FOREIGNERS DURING 1928: A CONDENSED BALANCE OF PAYMENTS[1]

(In million of dollars)

Classes of Transactions	Cash Claims Due from Foreigners	Cash Claims Due to Foreigners	Difference
COMMODITY TRANSACTIONS			
Merchandise, silver, etc. (adjusted)	5,334	4,497	+837
MISCELLANEOUS INVISIBLE TRANSACTIONS			
Freight (ocean, Great Lakes, and land transit)	143	227	—84
Tourist expenditures, minus payments to American vessels and minus customs declarations of returning tourists, etc.	168	693	—525
Interest on all private investments (long term and short term)	882	359	+523
War-debt receipts	210	...	+210
Government transactions (except war-debt receipts)	53	110	—57
Immigrant remittances	28	217	—189
Charitable and missionary contributions	...	52	—52
Other items (insurance, motion-picture royalties, cable charges, patents, Canadian electric power, etc.)	196	129	+67
Total, commodity and miscellaneous	7,014	6,284	+730
NEW PRIVATE LOANS, INVESTMENTS, AND DEPOSITS			
Net increase in American long-term investments abroad (par value)	...	1,339	—1,339
Bond discounts and underwriters' commissions	...	122	—122
Net cash payments for above	...	1,217	—1,217
Net increase in long-term foreign investments in the United States	481	...	+481
Reduction in net debt of American banks to foreigners	...	226	—226
Total, private capital	481	1,443	*—962
OTHER BALANCING ITEMS			
Gold shipped or earmarked (net)	272	...	+272
Discrepancy due to inaccurate figures	...	...	† (40)

* Net export of long-term capital, plus or minus short-term capital.
† Total errors would be much larger, as errors tend to offset one another.

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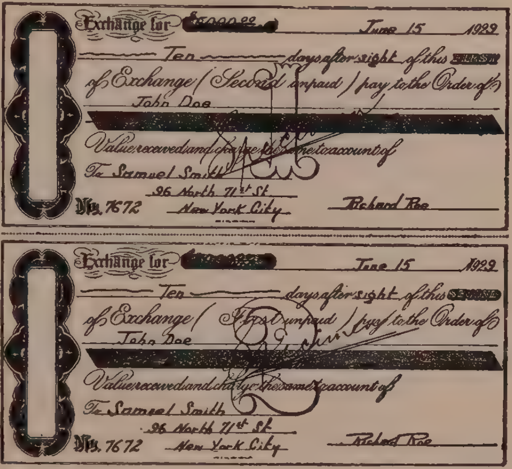
[1] The Balance of International Payments of the United States in 1928, Ray Hall, Trade Information Bulletin No. 552, United States Dept. of Commerce, Bureau of Foreign and Domestic Commerce.

because other countries use pounds, francs, marks, or other kinds of money, as media of exchange. This "paper" happens to be in the market because some one abroad has bought American goods and has sent the paper over here to discharge the debt. Pounds, marks, francs, or pesos could not be sent because we use dollars in our business. But just as the clearing house in a city or district operates to cancel the mutual obligations of the banks in its territory and so to pay only the remaining balances, the foreign exchange market operates to cancel the obligations of importer and exporter and so only balances in gold actually move backward and forward between, say, New York and London, or Paris. For Americans not only buy from foreigners; they sell to them. What one is owed is represented by paper which the others who owe can buy to discharge their debts. This happens also in London. What is bought from America will partially cancel what is sold to America; and there need be a movement of gold only to pay total differences.



Exchange for [redacted] June 15 1929
Ten days after sight of this FIRST
of Exchange (Second unpaid) pay to the Order of
John Doe
[redacted]
Value received and charge the same to account of
To Samuel Smith
96 North 71st St
No. 7672 New York City
Richard Roe

Exchange for [redacted] June 15 1929
Ten days after sight of this SECOND
of Exchange (First unpaid) pay to the Order of
John Doe
[redacted]
Value received and charge the same to account of
To Samuel Smith
96 North 71st St
No. 7672 New York City
Richard Roe

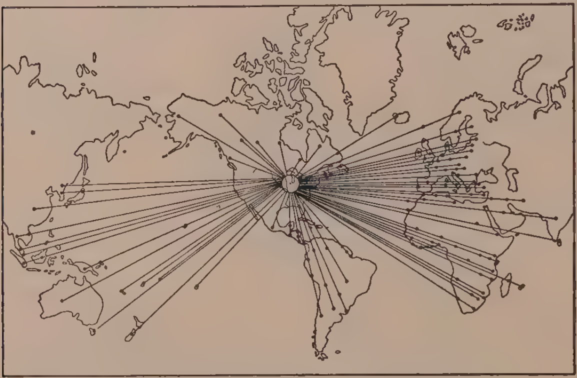
A draft in two copies to be sent under separate cover to eliminate loss in the mail.

John Doe, a resident of New York, is being paid by Samuel Smith a resident of Montreal, Canada. Smith purchased some goods from John Doe and has arranged an extension of credit for ten days. In Montreal, Smith goes to his bank and arranges through it to have a credit opened in his name at a New York Bank for a specified amount. Then he has a bankers' check or a draft drawn on this New York Bank payable in ten days upon sight to the order of John Doe. John Doe takes the copy of the draft which reaches him first, to the bank in New York, and if Samuel Smith has a deposit to meet the payment, the New York Bank accepts the draft. Then John Doe can sell the draft so accepted and receive payment at once. These services are generally obtainable at the same bank.

The market for these paper representatives of indebtedness is well organized in all important buying centers so that "Bills on London" can always be bought in the New York market or "Bills on New York" can be bought in the London market. But if trade is running more heavily one way than another, the price of these bills will be high in one place and low in the other. If the price difference becomes sufficiently great, gold bullion will be sent from the low market to the high one to correct the disequilibrium. But for this to happen, the price difference must be great enough to pay for the shipment of the gold from one market to the other. The points at which gold will move into or out of a market are called the "gold points."

2. *How Trade Is Interrupted by Tariffs*

Commerce among the nations is often hampered by other difficulties than those which arise because of differences in legal systems and currencies; it is sometimes deliberately restricted by import taxes. This is done sometimes because taxing imports represents an easy way of obtaining revenues; and sometimes for the protection of home industries from competition abroad. This last is the most serious interruption, naturally, because its very object is to prevent commerce.



These lines radiating from Chicago to all parts of the world indicate the correspondent banks with which relations are maintained by the Chicago institution to facilitate the foreign business of its customers. All large commercial banks have similar arrangements. (Adapted from *Bulletin No. 17*, Univ. of Ill., Bureau of Business Research.)

The arguments most frequently used to support protective policies are, (1) that protection allows home industries to grow large and vigorous, (2) that by growing strong, home industries furnish more employment and a readier market for home materials, and (3) that it is necessary to be self-sufficient in case of war, for then it may be impossible to bring in goods from abroad. All these arguments are frequently used in the United States to support our traditional protective policy.

Economists are very nearly unanimous in condemning this policy. Their objection is based upon the fact that there is an obvious economic advantage in regional specialization and that what each region can do most efficiently has nothing to do with national demarcations. They also point out the fallacies in the usual arguments advanced by the protectionists. They admit that tariffs can foster industries. But they point out that to force the growth of an industry in a place where it costs more to produce than it does in some other place is deliberately to raise prices to consumers. Since workers are also consumers, their prices are raised along with other peoples', and so, although their money wages may be higher under a protective tariff, their real wages will not be. They may even be lower, because if we devoted ourselves to what we could do most efficiently and so sold goods at a low price, the market would be wider, industries larger, and employment greater and more continuous. This would be in line with the modern policy, also, of doing business on a large scale, securing the efficiencies involved, and selling at a low price. A world organized on this basis would, on the whole, be far better off, they say, than one which artificially maintained a series of separate economic systems. Tomatoes can be grown in hothouses; but it is expensive to do so.

The argument concerning self-sufficiency is not an economic one. Economists frequently point out, however, that if industries are to be maintained on the chance of war, the constant expense to consumers ought to be set down as one of the costs of war and the people who pay the high prices for goods ought to know about it. The difficulty is that they have been told that tariffs for protection are part of a sound economic policy apart from their utility as self-defense. How absurd it would be for us to attempt to produce all our necessities, may be realized by considering what it would cost us to produce, say, the twenty kinds of goods listed as first among our imports. We might do it, but it would be as costly as making water run uphill when a downhill channel is open.

This relief map shows, on a comparative scale, the tariff barriers in Europe. Industrial progress is gravely hampered in all these nations by the restrictions on market areas imposed by these walls. Compare this with the wide free-trade areas in America. Here is one reason for our industrial supremacy. (Barratt's Photo Press.)

The general policy of protection seems to one who takes a long-run view of historical processes to be a part of the rise of the nationalistic idea—the idea that peoples of certain regions must shut themselves off from all others and develop independently a whole system of institutions. The rise of the political state in the past few hundred years came to a culmination in the Treaty of Versailles in 1919 when the self-determination of nations was made the basis of territorial redistribution throughout the war areas. The results of this policy were to set up numerous small nations with inflated nationalistic aspirations but no economic basis for being. When Austria and Hungary were separated, for instance, Hungary had most of the agricultural and other raw materials and Austria most of the factories. Neither could operate without the other, and since huge tariff barriers were immediately raised, both suffered immensely from unnecessary economic depression. The same difficulty arose, indeed, throughout Europe and accounts, in large part, for the reduced levels of living there. Suppose, for instance, each of the states in our Union suddenly decided to "protect" themselves economically from all the others and to force the growth of home industries. Instead of raising corn and wheat, Kansas would be trying to make iron and steel, New England would be trying to raise cotton, and Florida to mine coal.

We are luckier than Europe because in all our wide expanse we have no tariffs. A great part of our industrial advance must be attributed to this fact. Yet we seem unable to see the similar advantage we might have by trading freely with the nations which produce rubber, vegetable oils, sugar, and coffee. Free trade is surely one way to raise the levels of living.

CHAPTER 38

NATIONALISM AND ECONOMIC CONFLICTS

1. *Exporting and Importing Capital*

There is another phase of these international economic relations, which, because it has momentous consequences, we must consider here. This is the movement backward and forward of capital. People make investments in other countries because of inequalities in development. The more advanced a nation is in industrial technique, the greater the surplus of funds its citizens have at their disposal. Of course these funds are mostly invested at home in business enterprises. But some of them are always going out to other regions. There are a number of good reasons for this. Mr. Ford builds an assembly plant in Buenos Aires. Mr. Firestone sets out rubber plantations in Liberia. One of these investments abroad was to extend the market; one of them was to insure a supply of necessary raw materials. Both involved the movement out of the United States of capital. Another kind of investment is illustrated when a New York bank loans funds for the building of a railway in Java or Ecuador. Another, when a construction company loans a foreign government funds with which to hire the same company to build a new harbor or other public works. One loan reflects a free surplus of funds which is moving to the most profitable investment market. The other represents the extension of a business by the use of its own surpluses put to work in the most profitable places. The common aspect of all these is that they represent the accumulated surpluses of industrially advanced nations which go out to more backward ones.

The Ford assembly plant at Buenos Aires. (Courtesy Ford Motor Company.)

It would be expected that these capital investments would go out from such countries as the United Kingdom, Germany, France, Japan, and the United States and would flow into the Far East, Africa, and South America—from the most developed to the least developed regions. And this is exactly what happens. The United States has only recently arrived at the status of a capital-exporting country. Until a few years ago we were sufficiently undeveloped to present a profitable field for the investment of British, German, and French funds. But our development has been very rapid; and we now export more capital than any other nation—our present rate is about a billion and a half dollars a year, and the total amount at present is somewhere in the neighborhood of 14 billions of dollars. Whatever dividends and interest are earned by this capital have to be paid to us by the people of the countries in which it is invested. There are only three possible ways of paying: (1) in gold, (2) in goods, or (3) in services. In the case of the backward regions, South America, for instance, there are few services, such as England renders by her shipping or her financial system, available. There is also little gold. Most payments must be in goods—raw materials. This means an increasing import of goods into the United States in return for the services of our capital abroad.

The arrangements which have to be made to insure the flow of goods to us in payment for our capital loans are constant sources of irritation and, taken together with the rivalries of industries which are different in nationality for markets, sources of raw materials and places for profitable investment of funds, we are very close to what many feel one of the most fruitful sources of international irritation,—even, possibly, of war.

2. *Economic Issues and National Conflicts*

It is when we come to see the necessity there is for international trade and the difficulties which arise over the normal overflow of capital from one region to another, that we come upon the curious mixture of economic, political, and cultural forces which are involved in imperialism and world politics. Statesmen seek to extend the boundaries and the influence of their nations. Industries, through political influence are often able to use governments as the cat's-paws in their own struggle for aggrandizement. So that it frequently becomes impossible to say which actions originate in governments, which in groups of bankers, which in the gigantic industrial concerns which spread themselves, sometimes, completely around the earth. But, in any case, the results are the same. Governments support the industrial groups which are formed of their citizens, against those of other nations. This is equally true whether it is a question of opening markets, controlling raw materials, or seeking places for capital investment.

In the attempt to extend the influence of national groups, governments are constantly on the alert. They maintain trade services in the markets of the world to furnish information concerning all conditions which may conceivably affect the sale of goods. They are ruthless in their treatment of the people of backward countries when there is any threat to the sources of raw materials or to the safety of investments.[1] But most important of all, perhaps, is their willingness to enter into controversies with each other concerning imperialistic adventures in backward lands.[2] When great industries come into conflict their governments are seldom indifferent to the issue.[3] And when loans made to weaker governments or their people are threatened, the strong powers feel impelled to collect them by force if no other means happens to be available.

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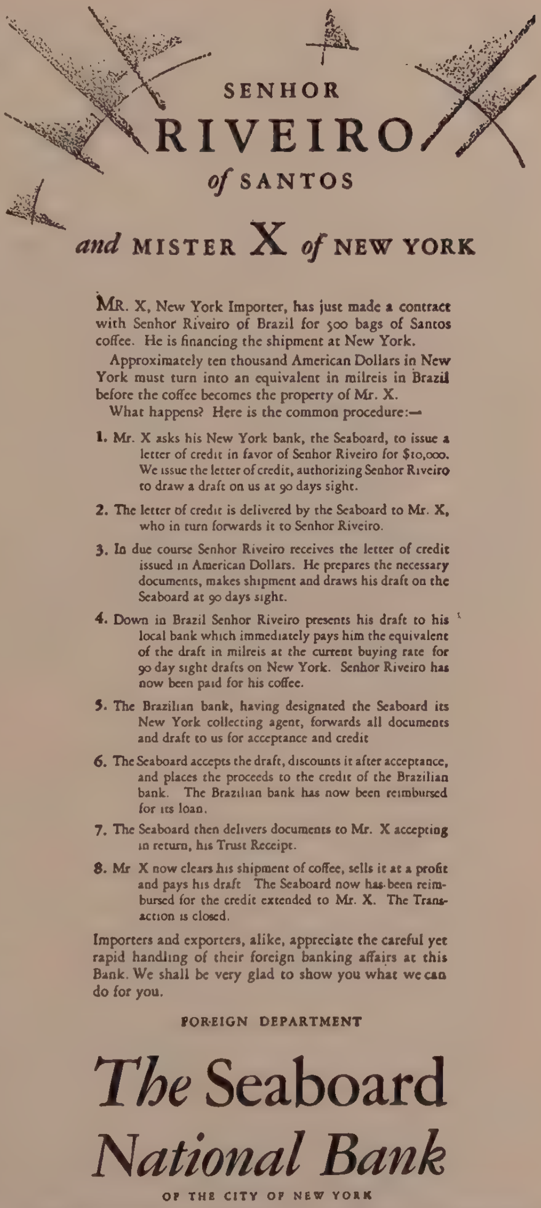
[1] Our own policy in the countries to the south of us is a good illustration of this. The British, German, and French division of Africa; the policy of the Great Powers in China, and their aggressions in the Near East are others.

It has often been argued that we have in these facts the most important cause of war. Yet people infrequently realize that it is our everyday policy which leads in this direction. The difficulty is, of course, that these affairs are arranged secretly rather than by "open covenants, openly arrived at." A few years ago thousands of American marines were sent to Nicaragua. Why were they sent? Fundamentally because the raw materials



SENHOR
RIVEIRO
of SANTOS

and MISTER X *of* NEW YORK

MR. X, New York Importer, has just made a contract with Senhor Riveiro of Brazil for 500 bags of Santos coffee. He is financing the shipment at New York.

Approximately ten thousand American Dollars in New York must turn into an equivalent in milreis in Brazil before the coffee becomes the property of Mr. X.

What happens? Here is the common procedure:—

1. Mr. X asks his New York bank, the Seaboard, to issue a letter of credit in favor of Senhor Riveiro for $10,000. We issue the letter of credit, authorizing Senhor Riveiro to draw a draft on us at 90 days sight.
2. The letter of credit is delivered by the Seaboard to Mr. X, who in turn forwards it to Senhor Riveiro.
3. In due course Senhor Riveiro receives the letter of credit issued in American Dollars. He prepares the necessary documents, makes shipment and draws his draft on the Seaboard at 90 days sight.
4. Down in Brazil Senhor Riveiro presents his draft to his local bank which immediately pays him the equivalent of the draft in milreis at the current buying rate for 90 day sight drafts on New York. Senhor Riveiro has now been paid for his coffee.
5. The Brazilian bank, having designated the Seaboard its New York collecting agent, forwards all documents and draft to us for acceptance and credit
6. The Seaboard accepts the draft, discounts it after acceptance, and places the proceeds to the credit of the Brazilian bank. The Brazilian bank has now been reimbursed for its loan.
7. The Seaboard then delivers documents to Mr. X accepting in return, his Trust Receipt.
8. Mr X now clears his shipment of coffee, sells it at a profit and pays his draft The Seaboard now has been reimbursed for the credit extended to Mr. X. The Transaction is closed.

Importers and exporters, alike, appreciate the careful yet rapid handling of their foreign banking affairs at this Bank. We shall be very glad to show you what we can do for you.

FOREIGN DEPARTMENT

The Seaboard
National Bank
OF THE CITY OF NEW YORK

A New York bank explains in brief how a transaction is financed through its foreign department. (Courtesy The Seaboard National Bank.)

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[2] For a treatment of nationalism and its dangers see Carleton J. H. Hayes, *Essays on Nationalism*, 1926; and for a treatment of imperialism, Parker T. Moon, *Imperialism and World Politics*, 1926.

[3] Cf. for an illustration of this the description Mr. Anton Mohr furnishes of the struggle for petroleum resources in his *The Oil War*, 1926. See also Ludwell Denny, *We Fight for Oil*, 1928.

we need most come from the countries to the south of us. Tropical resources—fruit, sugar, vegetable oils, coffee, spices, hardwoods, are the very ones no temperate climate produces. And all the "Great Powers" are located mainly in temperate climates. We, therefore, interfere, in Mexico, in Central America, and in South America, as the European powers do in Africa and the Near and Far East. We are fortunate in having less conflict with other Great Powers, and we have been able to maintain the "Monroe Doctrine," which prevents other nations from trespassing too greatly on our preserves. But there are British, German, and French investments on our continent, and these nations also get some of their raw materials and sell some of their finished goods there. We are by no means immune from conflict, though our problem is less serious than that which arises among European nations.

The Pan American Building in Washington, center for the activities of one important institution for international coöperation. (Courtesy Pan American Union.)

We have our wars, and we are not always able to keep out of the ones which arise in Europe. We, therefore, maintain an army and a navy at enormous cost, a cost not always appreciated by those who pay the taxes. In fact, war is, as we have seen, overwhelmingly the largest item of our yearly national budget, if we include wars which are past, and preparedness for those which may come.

Many international-minded people have realized these facts and have sought ways to reduce international irritations and to promote a coöperation which should replace the present continuous imminence of conflict. The disarmament conferences of 1920 and 1930 were recent steps in this direction, but long before this there had been attempts to build up codes of international law and, even, international courts of arbitration, so that compromise would, at least, be easier. Perhaps the most notable instrument of this sort which ever came into existence is the League of Nations which was written into the terms of the Peace of Versailles. But the United States has refused to coöperate in that venture. Into the extensive and bitter controversy which has arisen about every attempt to persuade the United States government to participate in international schemes for compromise and coöperation we cannot go here. The interested student will investigate the Pan-American Union, the League of Nations, and the World Court. What an economist can say, however, is that failing some means of coöperation, we shall continue to pay the inevitable costs of its absence, which are reflected in levels of living lower than they otherwise would be.

3. *The Problem of the Postwar Settlements*

The Great War was costly while it was in progress; but its costs by no means ended with the armistice. Western peoples are still engaged in paying the debts contracted by the belligerent nations. Nor have the victors, as they earnestly hoped to do, succeeded in shifting the war-costs to the vanquished. The reason they could not do so is partly because their total is far beyond the income of the Central Powers, but partly too because of the difficulty of transferring large sums across international boundaries. The result of the huge outlays from 1914 to 1918 is a heavy burden of taxation in every country, and a vast amount of international bickering about the settlements to be made. These quarrels and recriminations have preëmpted a good deal of space in newspapers and periodicals; but all too little of the discussion has been in any way enlightening.

The student who knows something of the history of the years of conflict and since, will recall that, among the Allied and Associated Powers, each bore a characteristic burden. We, for instance, came in only in the Spring of 1917, after England and France had been fighting for more than two-and-a-half years. During those years of neutrality there was enormous economic activity in the United States directed to the making of goods to be sent abroad. The Allies' demands were increased and their productive power was cut down; we were the only important neutral country with large resources and manufacturing capacity. But the goods we sent abroad in such quantities had to be paid for; and the payment changed our situation in the world even before we went into the war. Heretofore we had been a borrowing nation—that is, other countries, especially Britain, had exported capital to us. A considerable proportion of the securities of American corporations were owned abroad; and our own holdings in foreign corporations were negligible. The amount of war-goods to be paid for made great demands for American exchange in the London and Paris markets after 1914. Prices for bills on New York rose so high and the bills were so scarce that a serious situation arose. The only other way for such a debt to be met is to ship bullion; but this was soon exhausted; besides, the European countries naturally wished to conserve all they could to protect their currencies. What happened finally was that Americans began to invest in foreign securities so heavily that this relieved the one-sidedness of the exchange markets; also foreigners began to transfer to Americans their holdings of capital in American concerns. By the end of the war we had practically bought out all foreign holdings here and had made investments running into several billions abroad.

All this was private business; at least it was private here; for much purchasing from American concerns had, of course, been done for the account of foreign governments. But when we entered the war the situation was changed. There then arose an exchange of funds between governments. What it amounted to, so far as we were concerned, was loans from our government to those of our allies. Much of this loaning was for the purpose of enabling the governments to go on buying here since they had about exhausted other means of payment for American goods. But they were loans, not gifts; and it was always written that they were to be repaid. What had happened was this: our government, either through taxation or the sale of bonds (which taxpayers would eventually have to pay), had secured funds which it then transferred to the account of other governments. These then used the funds to pay for the goods they bought here.

Before the war ended the total of these debts to us became very large. Not only Britain, but also France, Belgium, Italy, and others owed us immense sums. Likewise all these countries owed Britain. France had made advances also to many smaller countries to the east of her. Taken altogether the international debts were very large and represented heavy burdens. But each country had a heavy internal indebtedness as well. Buying for an army and navy of the size of those engaged in the conflict involved an expenditure wholly without precedent. Not all the necessary sums could be, or at least were, raised through taxation. The larger proportion were got by the same means we used so freely—the issuance of bonds. There were, then, international debts to be settled, with the United States as the ultimate creditor nation—for even Britain owed us far more than was due her. And there were vast internal obligations to be met somehow. The situation of the European nations, faced with these necessities in the midst of postwar exhaustion, can be imagined.

The means of escape from their dilemmas was fondly envisaged by European statesmen as by way of transfer of their obligations to the Central Powers. They had been defeated; one of the conditions of the Versailles treaty was an admission of guilt. They should therefore be made to pay. But meantime—for these negotiations continued indefinitely, since the Allies could not decide on the proportioning of the spoils—the internal obligations had to be met. Budgets for running expenses, swollen for war purposes, were difficult to reduce; demobilization was slow; and bonds began to fall due. How to meet them? There is always one thing a government can do: it can print money. Of course, as we know from previous discussions, the purchasing power of money declines as the quantity increases; but governments are quite without honor, and they had only promised to pay so many francs, lire, pounds, or marks as the case might be. And a paper unit could have the national symbol on it and could be forced on the government's creditors. Every nation discharged its debts by this process which, as we know, is called currency inflation. The value of some moneys fell to practically nothing, as in Germany and Austria. The value of some was reduced to about one-fifth of what it had been, as in France. Of all the European nations Britain inflated least and came back to the gold standard soonest. The United States nominally kept the gold standard, though even here there were some of the indications of inflation. So the problem of internal indebtedness was settled by bankruptcy proceedings.

The external debts were another affair. They could not be discharged by printing money. It soon began to be questioned whether they could be discharged at all. Statesmen talked big about the honorableness of their various countries. But they also looked with a sympathetic eye on propaganda directed toward persuading the United States to make the grand gesture toward her former associates of complete cancellation. But we were in a withdrawing mood. We saw European armaments kept up, an army of functionnaires still employed, and all governments engaged in swindling their internal creditors with paper money. We sat back and stood by our contracts, unmoved by the argument that we had prospered while others fought. Meanwhile the Allies were working on Germany. It must have dawned on many statesmen long before they were driven to the public admission, that not much, if anything, could be got out of Germany and that not for some time. Neverthless elections were won in many countries on the issue of making Germany pay. Germany's position was this: that if anyone could demonstrate sources of funds, and would take the responsibility of transferring them across her borders to her creditors, she

YEAR	REICHSMARKS PRICE INDEX	TOTAL CURRENCY IN CIRCULATION (MILLION MARKS)
1913	100	6,070
1914	125	7,045
1915	148	8,916
1916	151	10,400
1917	203	14,851
1918	245	22,751
1919	803	41,020
1920	1,440	67,889
1921	3,490	90,791
1922	147,480	352,173
1923	126,160,000,000,000	74,954,802,000,000
1924 (Sept.)		1,520,511,000,000,000
1924 (Dec.)	131 *	1,911 *

* Reichsmarks — one reichsmark equals one trillion of the former paper marks.

This table shows what happened to currency in Germany during the great post-war inflation. Excessive issuance of exchange media reduced the value of the mark almost to nothing. The 1924 figure shows the reëstablishment of stability after virtual bankruptcy. (From Edie, *Economics, Principles and Problems*, p. 548, Crowell, N. Y.)

would be quite willing to pay. When the difficulties of accomplishing this appeared more clearly, the French conceived the notion that America might be made to hold the bag by making her payments to us conditional on the receipt of reparations from Germany. Our officials were, and have remained, cold to any such suggestion. There then began an elaborate process of face-saving for statesmen. International conferences, committees, commissions and the like began to be set up and to confer. Gradually, as the years passed, reason began to have more chance to function. The German obligations have been scaled down to a mere fraction of the original amounts demanded. And no one has yet explained how even these are to be paid.

For we are here face to face with one of those international trade situations to which these chapters are devoted. In order to pay the sums demanded of her by the Allies Germany would have to have a running balance of exports over imports at least as large as the funds to be transferred. But never yet since the war has she been in that situation. One device by which something could be got from her was "payment in kind," that is the transfer to the Allies of goods rather than money. The difficulty with this is that the transfer of any large amount of goods makes a productive stagnation in the country which accepts them. French, British, and Belgian manufacturers wanted to make and sell these things, in so far as they could, rather than to have them come in free from Germany. Workers felt the same way about it; they saw the possible loss of their jobs in the situation. Besides, if Germany's factories and mines were stimulated by the buying of their government, they would soon become prosperous; they would be dangerous competitors. So this device was used only to a limited extent.

The so-called "Dawes plan," was finally adopted. This reduced the annual payments to be made by Germany, reëstablished the German fiscal system, and set up an international committee to accept responsibility for the transfer of funds. The German state railways were mortgaged for the benefit of the Allies and a certain supervision over her finances was provided for. The decline of the mark was halted and Germany was again turned toward the recovery of a prosperity which was by now seen to be a condition of any international payments at all. After several years it again became clear that a crisis impended and that Germany would surely default on her payments if nothing were done. But meantime the vast surpluses of the United States had found a market in Germany. Germany could only meet her payments by borrowing: in no other way could she build up her credit balances abroad. The Dawes arrangements seemed to work because of this borrowing. So American investors were offered within a few years the opportunity of buying largely into German concerns at very favorable prices. Also many governmental bonds were sold here. By this means she managed to meet the Dawes plan payments for several years. But it was obvious that this could not go on indefinitely. Every bond or share which was bought abroad involved ultimate payments either of interest or principal and the amounts of these which would be due annually would be very large. It would be no easier to pay these than to pay the reparations demanded of her. American investors began to wonder whether, if the Allies kept up their demands for huge reparations, their own claims would ever be met.

The French had never ceased to be intransigent. Britain softened rather soon after the war, needing the German market; but France, to whom the major share of reparations was due because of her devastated territory, persisted in claiming the full payment of Versailles. This seems partly to have been the result of ignorance but partly also for political effect. She wanted the United States to accept her share of the reparations claims as payment of her debt to us. We remained cold. Her government had negotiated a funding arrangement (as had all our debtors) in which the debts were considerably scaled down. But not until 1929 was this Mellon-Berenger agreement ratified by the Chamber of Deputies. This was almost coincident with the meeting in Paris of another group of "experts" to devise ways and means for reparations payments and, in general, to attempt final liquidation of the war's aftermath; and to end a decade of misery only less disastrous than the years of the war itself. By the "Young Plan" agreed to there and finally ratified at The Hague in August of 1929, reparations were finally made a fixed amount, much reduced from former extravagant claims. Payments were to be of two sorts, one part fixed, the other part conditioned on the international situation of Germany. An International Bank was to

Signing the Young Plan at Paris. Owen D. Young sits in the center, at the end of the table. (Courtesy of *Wide World Photo.*)

be set up to succeed the machinery of the Dawes plan. It was hoped that this bank would become a sort of international clearing house for investment funds as well as an assistance in the war-debt liquidation. The main motive in setting it up, however, was to commercialize the war debts and take them out of the hands of the governments themselves. Germany's payments were to become the basis of a huge bond issue which would be sold in the capital markets of the world with the bank as the transfer agent for funds.

This, in very brief form, is the international situation at present. There are many interesting phases of the situation into which we cannot go; but there are two others of such consequence that we must refer to them briefly. One is the new tariff barriers among nations; the other is our particular situation as ultimate international creditor.

The war-settlement treaties were written in an atmosphere of extreme nationalism. Eastern Europe was even more divided than before the war and western Europe entered upon a program of self-sufficiency at all costs. If protection had been a moderate policy before, it was many times intensified now. The emotion of patriotism ran over into the economic field. Unfortunately, however, natural economic regions infrequently correspond to national boundaries, and many countries, after raising high tariff barriers, found themselves with an impossible problem of existing on their own resources alone. Until now political-minded statesmen have remained in power and have kept up the struggle for self-sufficiency. It has dawned on many citizens, however, that Europe, taken as a whole, constitutes an economic unit which corresponds roughly with the United States, and that separate nations there cannot be prosperous so long as they are divorced by tariffs, any more than could the separate states of our Union. Whether anything will come of the growing movement for a customs union it is still too early to say. Delegates to the League of Nations have interested themselves and in August of 1929 Premier Briand of France came forward with a proposal looking toward this end. Economic arguments have singularly little weight with politicians at any time. Perhaps propaganda of a political and sentimental sort may prevail. There has always been a group in France which believed in rapprochement with Germany; and it is obvious that the resources and activities of the two nations do rather nicely supplement each other. If, added to these, such agricultural regions as Poland, Czechoslovakia, and Jugoslavia could be drawn in, a rounded economy might be built up. The United Kingdom will, of course, view the proceedings with suspicion. If she should join it would separate her from her overseas Empire and reduce her to a third-rate power. She will be opposed. Italy also, under her dictatorship, lives among delusions of grandeur which would suffer too great a deflation in such a union. It will require a long time and a great reduction of enlarged nationalistic egos in all countries to create a situation in which even a customs union would be thinkable.

Our situation is better rather by luck than by superior intelligence. We are as bad as any others about protective tariffs—worse if our new situation in the world is taken into account. We are in much the same situation as was England when she went over to free trade. We are fast approaching the time when we shall have no crude stuffs to export but will want vast markets for our manufactured goods. No nation in this situation has any business to raise her tariffs or to maintain more than nominal barriers against trade. For retaliation is always quick; and besides, as we have noted, imports must always balance exports. We have been able to increase our trade latterly by loaning buyers the funds with which to purchase. But payment must sometime come back. Ultimately, and in the bulk, payment must be made in goods. Some gold may come in; our tourists abroad may redress the balance somewhat each year; but the mainstay of commerce is goods. If we want to send them out we must take them in, allowing other regions their specializations just as we have ours, and by which all can mutually benefit. The real absurdity of our situation is emphasized also by considering that we demand payment of the war debts. We know that payment must be mostly in goods, yet, in effect, we refuse to receive them.

The post-war years have indeed been difficult. They illustrate, as well as the war, the limited scope we allow reason in social affairs. There are those who learn nothing and forget nothing; and statesmen seem mostly to have fallen lately into this class. But there are bitter lessons written into the record which will become more plain as time goes on. Perhaps they may teach us that, even in international affairs, the living levels of people count more than costly gestures of irresponsible demagogues. There are plain and worthy ways to secure prosperity; perhaps they may become good ways in a political sense so that their champions may prevail.

BOOK III

PART I

PROPOSALS FOR REORGANIZING OUR ECONOMIC SYSTEM

CHAPTER 39

INDIVIDUALISM

1. *Relations between Economic, Social, and Political Conditions*

Economic affairs are so closely bound up with social and political institutions, that any important change in one must bring changes in the others. Any plan for comprehensive reform in one of these fields, therefore, must take account of the others as well. We have been speaking in earlier chapters, chiefly about economic problems of a specific sort, and it remains now to consider some of the broader social aspects of raising economic standards of living. We are going to consider several very comprehensive plans of economic policy. One of these would leave the situation fundamentally as it is at present. The others propose far-reaching change, though they differ in the extent and the kinds of changes they propose. We shall take up, one by one, these various policies and try to see first of all what sort of economic system each outlines, then some of the social and political bearings of each.

It may be well, first of all, to get a general idea of what we mean by social and political as contrasted with economic. It is, of course, not possible to make sharp distinctions here or ironclad definitions. But we have been giving a rough meaning to the word economic, implying that it includes especially those activities which are more or less directly concerned with the production and consumption of material goods. Broadly considered, these activities include a very large part of human life. We are constantly consuming material goods and almost every occupation or avocation of a human being contributes to or influences production in some way. By "political" we mean to indicate here those activities which are concerned with government; that is with directing, on a large scale, men's relations to each other. This includes insuring social peace, and coöperation in activities besides those of a strictly wealth-producing sort. In the word "social" we include, very broadly, all the other activities and relations into which people enter: the circles of friends among which they move, education and amusements, their charities, their scientific, literary, and artistic pursuits.

It can easily be seen how a man's economic status will affect his social and political status. If he is a man of wealth, exercising a powerful position in the world of production, he is apt to be politically powerful also, to exercise an influence in councils of state. He and his family are apt to be socially respected, to have what is known as prestige. They are apt, as we have seen in the chapters on standards of living, to possess opportunities for intellectual development and for passing their time in pursuits which are congenial and enjoyable. Likewise, on a low economic level, certain social and political consequences may be expected.

When we are considering a general economic system, too, we may expect certain social and political conditions to be associated with that system. Having wealth produced in a certain way and consumed in a certain way means that society must be organized in a certain way. It means also that wealth will be distributed and enjoyed in certain ways. For example, the system known as "feudalism," characteristic of the Middle Ages, was not only "economic" but "social" and "political." Based upon serfdom, it secured the production of wealth by maintaining a subject class only a little above slavery which was compelled to do manual labor and to obey the orders of hereditary superiors. There the economically inferior were the politically inferior, having little or no voice in the management of national or city affairs. They were also the socially inferior, having few if any opportunities for intellectual development and for free enjoyment. When a system like feudalism disintegrates and passes into another system, all of its parts change too, with more or less unequal rapidity. Political changes cannot far outrun economic and social. That is why political revolutions which are not based upon a fundamental economic and social change are apt to be only temporary.

Where economic and political programs are fused into social legislation. (Photo Ewing Galloway.)

It is, of course, beyond the scope of this book to analyze all the aspects of present-day society or to follow out in detail the remote effects which an economic change might have, but something of these interrelationships can be indicated briefly.

2. *The Meaning of Individualism*

One fundamental ideal or principle of social philosophy which influences legislatures and the general public in considerable degree, is that of freedom—individual liberty. This ideal is particularly in accord with our American traditions and it is surrounded by no small amount of emotional glamour; in fact it has been identified closely with patriotism and idealism itself. Looked at more closely, this idea of individual liberty discloses itself, not as a synonym for patriotism in general, but as one particular way in which certain philosophers have hoped to achieve national and individual prosperity.

The ideal of individualism was much talked of in the early nineteenth century economic discussions. It was invoked in opposition to such proposed measures as the forming of trade-unions and government regulation of industry. What is the bearing of the general ideal of freedom on such particular issues in economics and government?

Instances of individualism are difficult to find in our modern world. We are usually forced to use the illustration of Defoe's *Robinson Crusoe;* but this Missouri settler at least approximates independence. He built this house with his own hands, shaping the logs, chinking the walls with mud, splitting the shingles and fashioning the furniture. He was willing to forego glass in his window. His total expense was less than $1. Still he appears to wear factory-made clothes. He must have used a hammer and an axe; he holds a magazine in his hand; he looks sufficiently well-fed to have patronized a grocery. After all, even he did not succeed in escaping from society. Most of us are unwilling to make so heroic an attempt. (C. P. Cushing. Photo Ewing Galloway, N. Y.)

3. *The Development of Individualism*

If we look back to the eighteenth century, we shall find social philosophers preaching individual liberty under very different conditions and in opposition to very different adversaries. Locke, Rousseau, Jefferson, Adam Smith, and other apostles of liberty, when they advocated this ideal, were thinking of the outworn and irksome regulations which still hampered industry as survivals of the mercantilist régime. These regulations themselves had once served a good purpose. Strong national governments, strong kings, had been necessary in order to sweep away the medieval guilds, in order to place industry under strong, energetic, and efficient managers; in order to coördinate national finances and taxation; in order to rid the seas of pirates and to conduct exploration and colonization in the new countries.

But when that epoch had passed, when a certain amount of political stability and prosperity had been secured (that is toward the end of the eighteenth century) business men began chafing under governmental restraints. They saw that these restraints in many cases were unintelligent. The edicts made by Queen Elizabeth, for example, dictated exactly the width and weight that a piece of cloth must have, and, in fact, the exact detailed manner in which most manufacturers should carry on business. Manufacturers now believed there were more efficient methods, and demanded the right to use them. Government regulations were unfair; they favored certain classes and individuals. Court favorites, even, somewhat earlier, had been granted monopolies on the importation of certain commodities, such as pepper, silk, and wine, and there were eighteenth century survivals of this same sort of strict surveillance of business. Under these conditions it was no wonder that business men were demanding freedom to manufacture and trade in their own way without restraint. At just about this time political reformers were asserting the right of the individual to a voice in electing his government, and social reformers and poets were preaching the brotherhood and dignity of all mankind, the right of every human being to life, liberty, and the pursuit of happiness.

If we come down to about the third decade of the nineteenth century, we find that conditions have changed again and that individualism, although abstractly defined in the same way, really has different connotations. It connotes in 1830 the granting of still further power to middle-class industrialists. There is now hardly any question even of despotic control by landholding aristocrats. Their power, though surviving, is definitely on the wane. There is no serious objection to allowing the enterprising trader or manufacturer to start a new venture and to do pretty much as he pleases in conducting it.

But a new economic and social class is beginning to assert itself—the working class. Laborers are beginning to demand a voice in political control and a greater share in the world's new prosperity. They are beginning to protest bitterly against the low wages and unspeakable sanitary conditions prevailing in the mushroom factory towns which have grown up rapidly in response to the introduction of machinery and the great demand for its cheap products. At this time, we find business men, bankers, and factory owners appealing to the ideal of individual liberty to prevent the worker from effectually revolting against them. The cry of these captains of industry is that Anglo-Saxon traditions demand freedom of contract, the right of the individual worker to bargain directly with the individual employer. And upon this basis they argue against the intervention of trade unions between employer and employee, dictating arbitrarily to both how the employer should manage his business and under what terms the worker should work. We find these captains of industry also protesting against encroachment by the government upon business. "That government governs best which governs least," they insist. Reminding the people of past tyrannies and inefficiencies of kings and ministers of finance, they insist that the people shall not surrender an iota of their new-found liberty to any new bureaucracy. The government should keep its hands off industry except perhaps to stand by as a policeman and intervene against the commission of the most flagrant crimes. It may perhaps prevent or punish actual damage to life, limb, and property (especially when it is the worker who commits these offenses); it may organize an army to defend the nation against foreign powers; it may collect taxes; it may even exercise a few other such traditional functions; but it is contrary to the public interest for it to attempt in any way to supervise or regulate the conduct of industry itself or the relations between the worker and the owner of wealth.

Reformers of this period point out the terrible sufferings of the poor, of the child worker in the mines working up to his waist in water all night, the mother of a family who cannot earn enough to keep her family alive. Are these all indications that government should take a hand if alleviation cannot come in any other way? The answers of individualists here are various, but all to the same point. It is better in the long run that government should not intervene. Some men, content with the state of affairs, reply, "The poor we have always with us," and insist that typical as the condition may be, it is the will of God that this should be so; suffering ennobles, and the Lord's will should be allowed to pursue its own purposes. Selfish-minded factory owners of course resent interference with their own property rights. Evenly sincerely altruistic philosophers like Herbert Spencer, writing in the second half of the century, believed that government interference in these matters would, if carried to any considerable extent, do more harm than good. Governments are stupid and bungling, they said; human progress is a tremendously complicated thing, full of blind forces which will slowly but inevitably work out for the best. Let us be optimistic, hope that these things will straighten themselves out, but let us not try to rush them or to steer the course of progress too exactly or we shall do more harm than good!

4. *Darwinism and Economic Individualism*

Another scientific theory which originated toward the end of the nineteenth century contributed to constructive individualism. This was the doctrine of the survival of the fittest, based upon Darwin's theory of natural selection in the animal world. The theory as applied to biology held that progress has come about through the elimination of the unfit, in the struggle for existence during many successive generations. By analogy, it was argued that human progress, too, comes about through eliminating the unfit. Ruthless as it may seem, we are doing the cause of human progress no good by pampering the industrial weaklings and allowing them to perpetuate themselves or to build up such defenses that they will be immune from struggle. Let nature take its course and all will be well in time. So ran the argument of the defenders of economic individualism. If we can only secure an economic world in which there will be absolutely free competition, nature will automatically bring progress, prosperity, the survival of the fittest. We are now, they say, in a transitional state in which there is suffering, a little more perhaps than will exist once the age of machinery is well under way. But we must learn to tolerate the presence of suffering, starvation, and disease, for the sake of the society of tomorrow.

Where the poor, tubercular child or the stupid, low-grade worker is forced out there will remain the intelligent and physically capable citizen of tomorrow, who is able to fight for himself under conditions of free opportunity and win a place near the top. Strong and efficient leaders will be developed by this means. As Nietzsche urged in Germany at this time, the superman will rise on the fallen bodies of the weaklings. Inspired by the possibility and the hope of a free road to power and prosperity for himself and his family, the man of potential strength will exert all his energies, will sharpen his wits to think of new ways of improving methods of production. In rising to the top himself he will inevitably benefit humanity.

5. *The Present Significance of Individualism*

It will be noted that these arguments, all of which were very influential throughout the nineteenth century and are by no means unheard of today, are in principle the same as those which Adam Smith urged against the mercantilists. Let nature take its course. Man is led, as by a hidden hand, to benefit society in seeking to benefit himself. But the forces which nineteenth century writers feared as obstructions to "nature" were different from the obstructions which Adam Smith opposed. Eighteenth century revolutionists opposed an aristocratic, hidebound government, dominating the people; nineteenth century individualists feared a set of institutions created by the people themselves, the institutions of a more or less democratic government. Admitting that free competition was better than the restraints of an eighteenth century government, does it follow that free competition is better than regulations enforced by a twentieth century government—more responsive to the people's will, and more in possession of scientific method? Let us consider the issue as it applies directly to the present state of affairs.

In the first place, absolutely free competition is and always has been impossible, an imaginary ideal. It never existed and could not now exist. There have always been restraints upon the conduct of individuals in economic activity. The laborer, for example, in the early nineteenth century was prevented by the fear of hunger for himself and his family from bargaining freely with his employer. Market conditions, industrial institutions, collective forces of all sorts, have determined the conduct of the individual, however much he may have thought he was acting spontaneously, and they will always continue to do so.

But there is a very real significance in the ideal of economic individualism today. Even though it may be impossible to secure absolute freedom of competition, it is possible to work in that general direction instead of toward building up new and complicated social mechanisms. We can, as a general policy, try to limit government interference; we can in all disputed cases be biased in favor of the rights of an individual as opposed to those of a corporation. We can legislate against trade-unions, employers' organizations, active groups of all sorts within the economic order. We can abstain rigorously from government ownership and operation in specific industries. We can, if we choose, abstain from creating a government parcel-post system or we may even give over the postal system into private hands. We can pass laws against trusts and large-scale corporations and dissolve them. Today, economic individualism means such a general predisposition in favor of increasing freedom of action for individuals and small groups in industry.

Some of the old arguments pro and con still apply today. Will freer competition tend to develop individual initiative and ability, the production of leaders? Will it tend to eliminate the unfit individual? Will it tend to lower prices by compelling producers to cut rates against each other, to be satisfied with smaller profits and to improve their methods? Will free competition add an élan to industry that no bureaucratic system could attain, giving outlet to man's sporting instincts, his love of struggle, his desire for self-aggrandizement, mastery, and possession? That an individualist policy will do these things is the belief of its defenders, and a strong one, backed up by examples from history and from science.

This represents a quite usual attitude among business men. "Keeping the government out of business" is an increasing fetish which nevertheless has an important influence on public policy. (Courtesy of "The Business Week.")

6. *The Opposition to Individualism*

We need not attempt to solve the problem, since it is essentially debatable, but we should at least analyze one or two points which have been raised in criticism. In reply to the argument based upon Darwin's theory of the survival of the fittest, it is urged that economic struggle produces rather the survival of the unfit. What sort of worker emerges from the terrific grinding misery of unrestricted competition? Is it the self-respecting, honest, public-spirited, and intelligent man—as the individualist assumes? We must remember that even in the animal world man is not the only surviving animal. The reptile, the worm, the disease germ have also survived. It may be that the survivor of industrial misery will be the worker with the lowest standards, the one who is willing to work for the least wages, who demands least in the way of comfort, education, leisure, power, for himself and his family, who is willing to be a docile slave.

What type of leader will emerge from the struggle? Will this superman be a genuinely ideal human being? Unrestricted scrambling for wealth under ruthless conditions may well produce a shrewd unscrupulous man with little public spirit or sympathy for others, with little time for art or the enjoyment of life, with a mind grimly set upon material production and the extension of his power over others. Cannot government profitably take a hand to direct evolution toward the survival of the morally, mentally, and physically fit or to prevent standards from being lowered too far, by easing up the struggle so that there will be time for the cultivation of the finer qualities in human beings?

To speak in more distinctly economic terms, it is argued that individualism is inconsistent with the whole mechanizing movement of the age. Individualism means the perpetuation of many small independent units. Mechanizing is essentially the binding together of these units into organisms where the individual part loses its independence. As soon as people began using machinery, it is argued, they made individualism obsolete. Machinery of the modern sort demands concentrated wealth to own and operate it. No one man can do so. It demands an army of trained and specialized workers, in fact, wheels within wheels. It demands, in short, the development of a social machine coördinate with the development of machines of steel.

The tendency of the last generation toward industrial consolidation seems to demonstrate this point. With industrial consolidation, as we have seen in previous chapters, comes a great saving of energy and greatly increased efficiency. To try to split society into individual units again would not only be impossible, but would, if it were possible, bring about all the old inefficiencies, the duplication of efforts by individuals, the frustration of efforts through opposition, when the obvious need is for all to devote their energies to a genuine coöperative effort toward a common end.

Advocates of collectivism in general also urge that the new industrial machine shows distinct signs of becoming acutely sensitive to social demand, anticipating and providing for the wants of people in a genuinely scientific fashion; to destroy this machine, therefore, would throw us back upon the old blind, hit-or-miss method of producing for the market a certain amount without any idea of what the demand really is.

Another reason why no great step toward individualism can be made at present is the power and determination of present organized workers. Whatever be the justice of the case, there is no doubt that organized labor is now, in most western countries, strong enough to resist total disintegration. It is winning a voice in management which no isolated worker could hope to achieve, and it will not surrender that to return to the autocratic domination of an individual enterpriser.

Employers and large-scale producers, too, seem to be well satisfied with much that is collectivist in our present social order, satisfied, for example, with the tremendous machinery of banking and credit which has grown up with a certain body of ironclad regulations, satisfied that the government should exercise a control not only over currency but over banking methods for the prevention of frauds and the securing of certain standards of efficiency. There is little disposition to question the value of such government enterprises as the postal system, whatever may be the desirability of further extension of governmental activities.

Collective effort built this; but we sometimes attempt to avoid the logical further inference that more collective effort is needed. Sometimes we say that what we need is more individual enterprise. No individual, however, ever built a skyscraper. (© Doherty. Ewing Galloway, N. Y.)

Practically speaking, then, individualism today does not mean to anyone an ideal of complete or extreme freedom. It does not connote philosophical anarchism. It implies a moderate tendency toward relaxing social control in doubtful cases. The desirability of economic individualism at present, therefore, cannot be debated in general terms. We have seen the advantages to be looked for from movements in this direction and the dangers of them. It remains, then, to consider any particular case such as the operation of railroads in the light of these advantages and drawbacks.

7. *The Development of a Mean*

As a rule, the individualist in modern economic society is a man who is fairly well satisfied with most fundamental aspects of the present system; what he means by calling himself an individualist is not that he desires any wholesale disintegration of what is, but that he opposes the introduction of extensive socialistic schemes. He may admit, frankly, that the present system is a compromise between individualism and socialism and will defend it on that account. He will concede at the same time the advantages and drawbacks of both general ideals, but will feel that the present system contains many of the advantages of both individualism and collectivism and as few of the drawbacks of each as reasonably could be expected. His outline for a successful social order would be one which had just enough opportunity for a free competition to develop individual initiative and to permit the traditional returns to successful enterprise, but not enough to permit ruthless or excessive competition. He would favor an order in which groupings of individuals were allowed to form and function but not to become too powerful. In that way, he would say, society can be prevented from going to either extreme, toward crystallization or toward anarchy.

Such an answer seems to many the part of common sense or moderation, the golden mean. But it must be remembered that it leaves many of the most serious problems unsolved. It ignores the arguments of those reformers who urge that the whole system is unjust and that further attempts to patch it up can only achieve the temporary pacifying of the worker. It has the proved advantage of being at least workable, or having been tested by time, whereas other schemes must depend upon theoretical claims to superiority. But it is fundamentally a surrender to the blind forces of nature. It is an admission that man is, so far, incapable of directing economic and social progress as a whole. It is the policy of muddling through which always has been acceptable as the easiest way, especially to the Anglo-Saxon world, but it is an evasion of many fundamental issues. More particularly, it is an evasion of the issue as to just what parts of industry, if any, should be allowed to move spontaneously toward further centralization, and how far. The attempt to stop centralization, by such means as the Sherman Anti-Trust Law, necessitates an active interference by government in industry, which is in itself a violation of one fundamental principle of individualism. Apparently the theory as a whole is impossible at present; some sort and degree of collective control over industry, either by governments or large corporations, is inevitable. Like all other very abstract social policies, the word individualism becomes meaningful only when we fill it in with many specific decisions, so as to indicate concretely just where the dividing line should be made between the two extremes.

CHAPTER 40

COLLECTIVE BARGAINING

1. *The Development of the Collective Bargain between Employer and Employee*

The ideal opposite to individualism is collectivism. We have already considered some of its implications, its virtues and defects. Indeed in other places in this book we have recognized many times the general values of coöperation, and of centralized control, for the saving of energy and for the increase of efficiency. There is no need to dwell further upon these. But there are several brands of collectivism, all claiming these values and each claiming to realize them more perfectly than the others. We shall consider, then, one by one, some different ways in which social and governmental control may be extended over industry. As we go along, it will be important, as before with individualism, to consider not only the economic consequences, but the social and political.

The first of these specific plans is that of collective bargaining between the employers and employees of urban industry. We noted, in regard to the early nineteenth century, that a fundamental claim of the individualist factory owner was the right of the individual employer and employee to bargain with each other. It was urged that for any outside body whatever, government or union, to step in, was a violation, not only of the right of the employer, but of the worker as well. Instances could be given in which individual workers were content to accept lower wages or longer hours, and in which the union or some philanthropic government official sought to prevent him from doing so. Was not this, then, an injury to both parties? That question has never been settled theoretically, but collective bargaining has developed in spite of opposition. Apparently enough workers have preferred to act as groups rather than as individuals so that the movement toward bargaining by means of unions has grown consistently ever since the beginning of the nineteenth century.

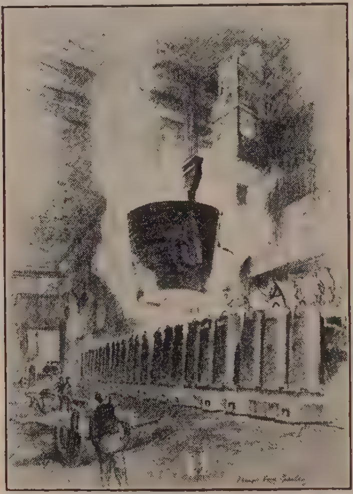
2. *Craft and Industrial Unionism*

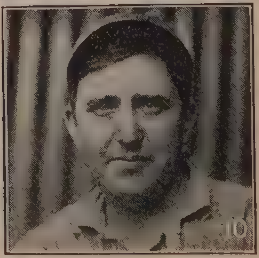
The history of the development of trade-unions we shall not follow in detail, but it is well to be aware of two main lines along which unionization has proceeded. One type of union generally referred to today as the craft union is based upon the type of work done. Members of a single group are people who do the same or approximately the same work. The American Federation of Labor is largely made up of such unions. There will be an organization, for example, of electricians in a given town, one of plumbers, and one of steam fitters. Electricians' unions in various towns will organize into state and national organizations. There may be, in the case of a large and important craft, subdivisions; but the basis of mutual affiliation is essentially that of the craft.

Another type of unionism which has come into prominence lately is the industrial union. It is based, not upon the kind of work done, but upon the product made, or, in general, upon the organizations of workers of many types in carrying out some coöperative enterprise such as railroading. An industrial union, for example, might consist of all the various types of workers who contribute to the making of shoes. This would include, of course, not only the shoe machine operators, but electricians, carpenters, steam fitters, and clerical workers. Thus in the industrial union, craft lines are erased and affiliation is based upon the total product that emerges.

An electrician, probably a member of an electrical workers' union. (Photo Hine.)

Of the two types, the craft union is at present the more strongly intrenched, and it has many elements of superiority. Its membership is more apt to be homogeneous. Its members, doing the same sort of work, are likely to be able to meet on a common intellectual and social level. Thus they have a certain advantage in being able to coöperate and act as a solid unit. The industrial union, by contrast, is made up of an extremely diverse membership. Some of its members are skilled and others unskilled; some educated and prosperous, and some not. It has proved extremely difficult for members of an industrial union to coöperate amicably and efficiently on any but the most simple and urgent matters, such as a fight against a common employer, where all minor difficulties can be forgotten for the moment. As soon as these larger questions are settled at all satisfactorily minor conflicts are bound to come up; for instance disputes between the skilled and the unskilled, or concerning policies toward discipline. Industrial unions have tended, as we shall see, toward greater radicalism and violence in policy. Craft unions, especially those made up of skilled and prosperous workers, have tended to be fairly conservative and to be willing to deal diplomatically with their employers. They observe certain standards of responsibility in supervising the quality of work done by their mem-

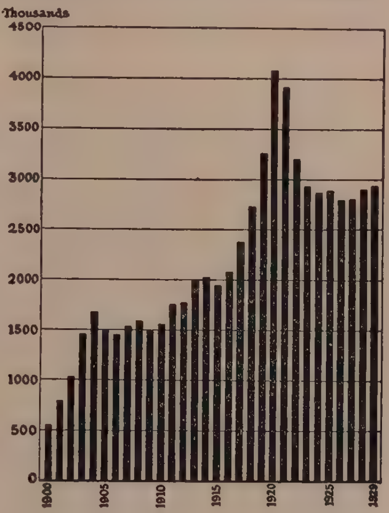




Workers in the steel industry: (1) Italian; (2) Irish; (3) German; (4) Lithuanian; (5) Polish; (6) Serbian; (7) Russian; (8) Slovak; (9) English; (10) American. (11) Interior of a steel mill. The difficulty of organizing large groups of men for collective bargaining is apparent when the different nationalities involved are considered. (Photos by Hine. Drawing by Vernon Howe Bailey. Courtesy Interstate Steel Company.)

bers and holding to agreements made. The policy of the industrial union, on the other hand, tends to be one of undisciplined force.[1]

There are certain influences at work to strengthen industrial unionism and to undermine the craft unionism. The whole tendency of the machine age is towards destroying individual crafts. Countless occupations of the past which demanded skill and responsibility, which had traditions and a fairly solid organization, such as shoemaking and tailoring, have been displaced by machinery or split up into many small subordinate and specialized crafts. The makers of shoes now, instead of being men of a similar occupation, are, as has been said, men of widely different occupations. This process of craft disintegration is constantly going on. Every newly invented machine, every industrial amalgamation among formerly independent units, tends to modify the nature of the craft. Accordingly, craft distinctions are constantly destroyed. The members of a union continually find that they are composed of slightly different groups having divergent interests, or that instead of being a group of skilled artisans they have become machine tenders whose former skill is now useless. Of course, these changes do not happen with lightninglike rapidity, and organizations are modified so as to approximate the changes in industry itself, but the irresistible tendency is toward throwing the members of all crafts into a common aggregation of unskilled laborers, toward displacing the craftsman by the more or less unskilled machine operator.



The growth of the American Federation of Labor has not been evenly continuous. When times are good and work plenty, workers are less inclined to realize the value of the union as a means of better bargaining. When conditions of employment are less favorable workmen are much more apt to turn to the union. The great growth in 1915–1920 was during a period when wages lagged behind rising price levels. It was a time of great union activity, many strikes, and much unrest. (Based on official statistics of the A. F. of L.)

As the craft lines merge, industrial unionism grows. The group in operation becomes a vast, indiscriminate conglomeration of workers having different functions, yet not clearly marked off into exclusive groupings on the basis of kind of work done. All of them feel themselves more or less on the edge of a precipice, in danger of having their livelihood threatened. Thus a new loyalty tends to arise, that between men who work at the making of one product, and executives who receive their pay from the same source, who coöperate in the same industry. Group consciousness is being strengthened among all coal workers, among all steel workers, and all railroad workers, at the expense of the narrow and precisely drawn craft union grouping. This new conglomeration has the strength of being located in approximately the same spot. It can concentrate its forces, whereas electricians, for example, are scattered all over the country. It has the advantage of being able to direct its forces against a single enemy, either a common employer or a group of similar employers whose interests are more or less identical, whereas the organization of craft unions has to direct its energies against a diversity of scattered employers some of whom may be just and some unjust, and who, in any event, cannot be faced as a single enemy.

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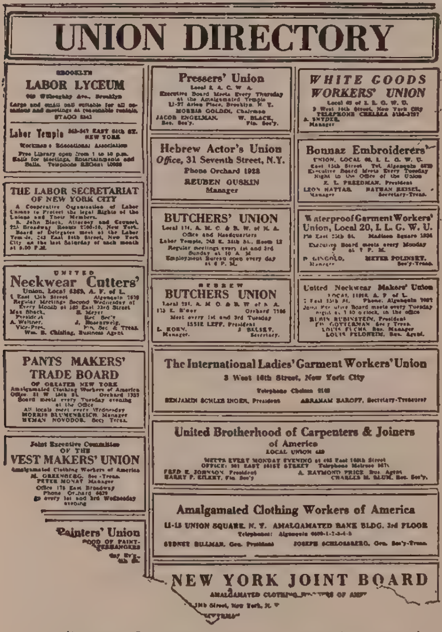
[1] Certain reservations have to be made in any general description of union policy. There are instances of conservatism among industrial unions as there are instances of radicalism among craft unions. Generally speaking, however, the above description is perhaps as accurate a one as can be made without particularization.



UNION DIRECTORY

BROOKLYN
LABOR LYCEUM
949 Willoughby Ave., Brooklyn
Large and small hall suitable for all occasions and meetings at reasonable rentals.
STAGG 3842

Labor Temple 243-247 EAST 84th ST. NEW YORK
Workmen's Educational Association
Free Library open from 1 to 10 p.m.
Halls for Meetings, Entertainments and Balls. Telephone REGent 10038

THE LABOR SECRETARIAT OF NEW YORK CITY
A Cooperative Organization of Labor Unions to Protect the legal Rights of the Unions and Their Members.
S. John Block, Attorney and Counsel, 225 Broadway, Rooms 2700-10, New York.
Board of Delegates meet at the Labor Temple, 243 East 84th Street, New York City on the last Saturday of each month at 8.00 P.M.

UNITED
Neckwear Cutters'
Union, Local 6369, A. F. of L.
7 East 15th Street Algonquin 7670
Regular Meetings Second Wednesday of Every Month at 162 East 23rd Street
Max Shack, President
A. Weltner, Vice-Pres.
E. Meyer, Rec. Sec'y
J. Rosenzweig, Fin. Sec. & Treas.
Wm. R. Chisling, Business Agent

PANTS MAKERS' TRADE BOARD
OF GREATER NEW YORK
Amalgamated Clothing Workers of America
Office: 31 W. 15th St. Orchard 1357
Board meets every Tuesday evening at the Office
All locals meet every Wednesday
MORRIS BLUMENREICH, Manager
HYMAN NOVODOR, Sec'y Treas.

Joint Executive Committee OF THE
VEST MAKERS' UNION
Amalgamated Clothing Workers of America
M. GREENBERG, Sec.-Treas.
PETER MONAT, Manager
Office 175 East Broadway
Phone Orchard 6639
every 1st and 3rd Wednesday evening

Painters' Union

Pressers' Union
Local 3, A. C. W. A.
Executive Board Meets Every Thursday at the Amalgamated Temple
11-27 Arion Place, Brooklyn, N. Y.
MORRIS GOLDIN, Chairman
JACOB ENGELMAN, Rec. Sec'y.
W. BLACK, Fin. Sec'y.

Hebrew Actor's Union
Office, 31 Seventh Street, N.Y.
Phone Orchard 1928
REUBEN GUSKIN
Manager

BUTCHERS' UNION
Local 174, A. M. C. & B. W. of N. A.
Office and Headquarters
Labor Temple, 243 E. 84th St., Room 12
Regular meetings every 1st and 3rd Sunday at 10 A. M.
Employment Bureau open every day at 6 P. M.

HEBREW
BUTCHERS UNION
Local 234, A. M. C. & B. W. of N. A.
175 E. B'way Orchard 7166
Meet every 1st and 3rd Tuesday
ISSIE LEFF, President
L. KORN, Manager.
J. BELSKY, Secretary.

WHITE GOODS WORKERS' UNION
Local 62 of I. L. G. W. U.
3 West 16th Street, New York City
TELEPHONE CHELSEA 5756-5757
A. SNYDER, Manager

Bonnaz Embroiderers'
UNION, LOCAL 66, I. L. G. W. U.
East 15th Street Tel. Algonquin 3657
Executive Board Meets Every Tuesday Night in the Office of the Union
Z. L. FREEDMAN, President
LEON HATTAB, Manager
NATHAN REISEL, Secretary-Treas.

Waterproof Garment Workers' Union, Local 20, I. L. G. W. U.
East 25th St. Madison Square 1934
Executive Board meets every Monday at 7 P. M.
P. LINGOLD, Manager
MEYER POLINSKY, Sec'y-Treas.

United Neckwear Makers' Union
LOCAL 11016, A. F. of L.
7 East 15th St. Phone: Algonquin 7082
Joint Executive Board meets every Tuesday night at 7:30 o'clock, in the office
LOUIS FUCHS, Bus. Manager
LOUIS FELDHEIM, Bus. Agent

The International Ladies' Garment Workers' Union
3 West 16th Street, New York City
Telephone Chelsea 2148
BENJAMIN SCHLESINGER, President
ABRAHAM BAROFF, Secretary-Treasurer

United Brotherhood of Carpenters & Joiners of America
LOCAL UNION 488
FRED E. JOHNSON, President
HARRY P. EILERT, Fin. Sec'y
A. RAYMOND PRICE, Bus. Agent
CHARLES M. BLUM, Rec. Sec'y.

Amalgamated Clothing Workers of America
11-15 UNION SQUARE, N. Y. AMALGAMATED BANK BLDG. 3rd FLOOR
SIDNEY HILLMAN, Gen. President
JOSEPH SCHLOSSBERG, Gen. Sec'y-Treas.

NEW YORK JOINT BOARD
AMALGAMATED CLOTHING

(From the *New Leader*, May 18, 1929.)

3. *Full Collective Bargaining*

In spite of these forces the issue is by no means decided between these two types. Both are in existence and functioning. The craft union still maintains by far the greater prestige and the greater ability to act quickly and efficaciously in a dispute. Strikes of industrial unions have generally proved hard to organize and conduct. When we speak, therefore, of collective bargaining we mean usually bargaining between federated craft unions and employers.

There has been a development of another kind in collective bargaining accompanying the increase in the completeness of organization on both sides. The simplest type of collective bargaining occurs when workers appoint a spokesman to present a request or a demand to a single employer. The weakness of this mode of bargaining from the standpoint of the worker is obvious. The ringleader, as he is called, can be dismissed. The demands of the workers can be ignored. If the workers strike, they can be quickly replaced with others. A somewhat more complex system exists when the workers in a factory are organized with those of other factories either along craft or industrial lines. Where they are allied with other workers of the same craft elsewhere or with other units (factories, mines, etc.) in a single industry, they can strike simultaneously. It will be, of course, possible for the employer to secure other workers, but the more extensive and elaborate the union, the more difficult it will be for the employer to secure trained workers and the more pressure can be brought to bear upon such workers not to hamper the success of the strike.

The third stage of development constitutes what is known as full collective bargaining. This exists when both employers and employees become rather completely organized. For this it was necessary that there should develop employers' associations as well as workers' associations. Such associations have developed rather recently in this country and in Europe, usually following and paralleling the organization of the employees and intended chiefly to oppose them. Thus, we have employers' associations on both craft and industrial lines. We have barbers' unions and master barbers' associations. We have bituminous coal workers' organizations and associations of bituminous coal operators. The activities of these employers' associations have been in part militant, just as the activities of the unions have been. Where strikes have occurred, the employers have retaliated by lockouts often, or by concerted agreements to close down work until their demands have been met. In some cases a certain employer who is in trouble is tided over financially by the organization of which he is a member, just as certain striking unions are tided over by sympathetic groups.[2] When unions have adopted violent tactics, employers' organizations have not been slow to go even further, and have employed "strong-arm" forces, "labor spies" or under-cover men, and special police.[3] When unions have

On March 16, 1926, Martin Winkler was dragged to the police station in Paterson for singing *America*—a good illustration of hysterical police tactics in a typical strike situation. There was violence and rioting, much of it provoked by the irresponsible use of force by the authorities, throughout this strike. (International Newsreel Photo.)

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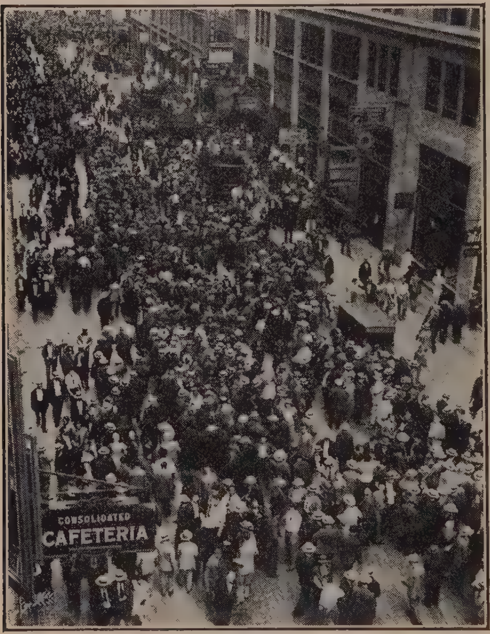
[2] Cf. the discussion of trade association activities above.

[3] Cf. Sidney Howard, *The Labor Spy* (Republic Publishing Company, 1924). It must not be assumed from what has been said here that force is resorted to by employers only as an answer to similar tactics among workers. It would be about as true to state the matter in the reverse way. It is frequently the continuous existence of company-police or

attempted to agree upon a boycott of the products of such firms, these firms have retaliated by blacklisting prominent union leaders. Elaborate systems of espionage have been worked out to follow undesired workmen from place to place, even to detect their assumed names and then obtain their dismissal.

All this may seem to be rather collective warfare than collective bargaining. Full collective bargaining implies more peaceful dealings between such organizations on both sides. In many instances, this state of affairs prevails to a very high degree. In the New York printing trades, for example, organizations of skilled craftsmen and of their employers, the master printers, meet regularly in certain well equipped offices to discuss mutual problems in a spirit which is usually amicable and fair. It is the ideal of many economic reformers to bring about such conditions throughout industry, to have the employers everywhere recognize the right of men to organize, then to organize themselves into associations not with a view of combating the workers but of co-operating with them for the interests of both. A society so organized would be a system of elaborately interrelated groups and subgroups, each rather flexible, no doubt prevailingly selfish, but willing to compromise in a reasonable way. Such a system would not be a solution of all of society's economic problems. The world would still be full of constant rivalry, misunderstanding, and dispute over new issues constantly arising. One cannot expect that mere membership in such a system would make a unit unselfish or perfectly reasonable, but it would at least provide a ready mechanism for the adjustment of disputes. It



A scene on 36th Street in New York City, July 2, 1929, when 30,000 cloakmakers went on strike. (International Newsreel Photo.)

subsidized public officials always ready with suppressive force at the first sign of protest among workers, which aggravates a potential conflict and causes resort to violence. Provocation is constant when arsenals are maintained in factories, under-cover men are at work, and police in continual evidence.

would insure that grievances instead of rankling in silence or being misrepresented, should be brought into the daylight. It would provide that the clash of interests should be clearly recognized, and this is a step toward adjusting them equitably.

4. *Forced Bargaining*

Unfortunately, we are at present far from even this degree of orderly adjustment of disputes. Full collective bargaining is in existence only in a very small minority of industrial units and even there the mechanism of operation is not thoroughly worked out. In some parts of the United States, for example the West Virginia coal mines, even the right of workers to organize into unions has not been recognized. So that at present, union organization exists in various industries in every degree of development. This naturally makes the situation chaotic and difficult to be dealt with in any comprehensive way by the government or otherwise. But efforts are being made, in the United States, England, France, and Germany, toward the establishment of governmental mechanisms for the purpose of aiding in the settlement of industrial disputes, and considerable progress has been made in the last few years.

A demonstration of union bakers to advertise the "union label" on bread—a developmental rather than a militant activity. (International Newsreel Photo.)

In this outside intervention, there are several stages or degrees of development, from mere friendly advice to coercion. At times, the leaders of opposing forces in a particular dispute will voluntarily call for a mediator; or the governor or mayor of the locality may offer such assistance, to be taken or rejected. The usual procedure is for each of the parties to select some man of established public reputation for fair-mindedness and general ability. Presumably he is to be disinterested but, of course, the tendency is to choose some one who is known to be favorably disposed to one's own side. These two men come together and choose a third, and the three men in council decide the question. Similar expedients have, of course, been tried times without number in the arbitration of international disputes, and the same difficulties apply in both cases. Where the matter is entirely voluntary, an organization will not submit to outside adjustment unless it feels that there is no other way. If it feels powerful enough to win by strike action or other means of force, it will prefer these in the great majority of cases. Therefore, in both international and industrial questions, the issues submitted to such tribunals are usually the minor ones. Even after the decision is given there is no guarantee that it will be accepted by both parties or carried out. In the adjustment of any industrial dispute, it has been said, there must be three phases, the legislative, the judicial, and the executive. The agreement upon the decision must be reached. Later disputes upon the meaning of that decision and its application to particular cases must be settled and finally the decision of the authorities must be carried out in practice. Naturally, a mere informal appeal to outside mediation will be weak, especially in the second and third phases.

In the effort to increase the efficiency of impartial settlements, it has been suggested that we do one or both of two things—to create regular standing agencies for settlement and to endow them with authority. Obviously there are many degrees of such development. It can be made compulsory to submit the dispute to a tribunal while the acceptance of the decision remains optional. This has at least the advantage of bringing the dispute into the open. It can be made compulsory to submit the question and to accept the award while the execution of the matter is unsupervised.

A few attempts have been made, notably in Australia and in Kansas, to enforce arbitration—both the submission and the acceptance of the decision. The Kansas Industrial Court was such an attempt. Although much was expected of it, the results were no more successful than in most other attempts at compulsory arbitration. The constituted authorities naturally feared opposition by the workers and so made their decisions at least fair to the workers in most of the disputes. So that, as it turned out, the chief objection came from the employers; but the unions too were dissatisfied; they objected to the coercion on principle, and found no contentment in the decisions. There was constant trouble from the passage of the act until its virtual emasculation by court interpretation. To all intents and purposes the law is now a dead letter.

5. *Obstacles to Forced Bargaining*

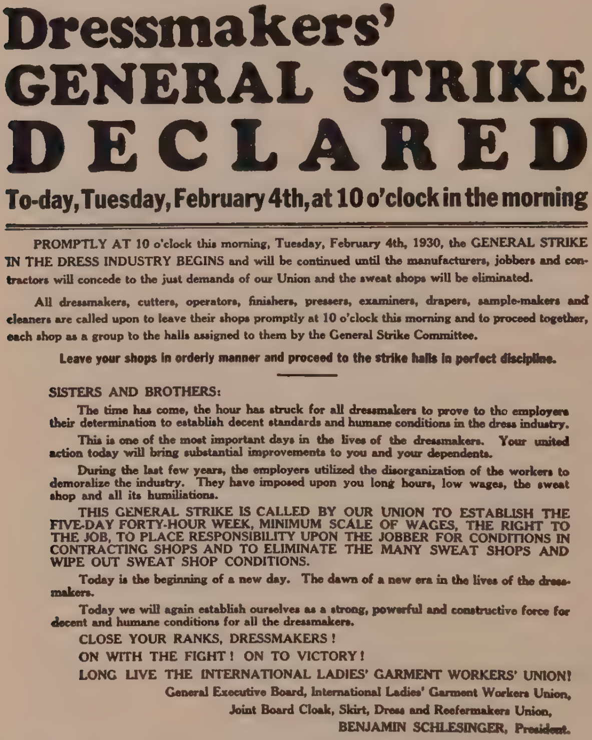
There are serious obstacles to compulsory arbitration. It is next to impossible to force workers at the points of bayonets to carry on occupations they do not wish to carry on, and only under the most extreme despotism, powerfully organized, can force be even momentarily successful. Furthermore, public opinion is far from convinced that the right is on the side of the coercing government. In western countries, especially, the tradition of individual liberty is an obstacle to the too drastic enforcement of unwelcome laws. Ordinarily both governments and tribunals are unable to prove to the satisfaction of any one the thorough justice and scientific character of industrial decisions. The settlement of a dispute about wages, for example, involves, in the first place, the collection of an enormous amount of information, of detailed statistics. If street-car conductors demand an increase in wages and assert that the company is well able to pay it, that raises many intricate issues. For a scientific decision, the tribunal should have not only full data as to the present wages of the men, but data as to the ability of the company to pay more, which depends upon its profits as compared with the profits of other similar companies, and upon the prosperity of business generally. It should have data also upon the real value of the wages now received, that is to say upon its relation to the cost of living. If living costs have materially increased while wages have remained the same, that is an important point.

But the gathering of statistics on these points is a slow and intricate task, so that figures once gained may be out of date by the time they are ready. Figures should be available also upon the amount of wages which men are getting in similar occupations in the same and other industries. Still deeper questions are involved. How much are they entitled to; what share in the collective income of the company, of the industry as a whole, and of the nation? If the criterion be social service or skill, how is one to compare street-car conductors with other workers? The easiest way, of course, is to accept the status quo as a basis. If street-car conductors have uniformly been getting so many cents an hour less than motormen, the practice is to continue the same proportion in wage adjustments up and down; but this of course evades the question since the previous rate may have been unfair.

A refugee colony in West Virginia. These tents were the temporary quarters of striking miners and their families who were evicted from company-owned houses. It was raining when this picture was taken and the creek in the foreground carried away many of the miners' personal effects which had been thrown into it by the company agents as they evicted the miners. (Courtesy McAllister Coleman.)

In other words, as soon as we attempt to take industrial disputes out of the realm of brute struggle for existence, we assume the task of devising rational standards of determining how the social income should be apportioned. We assume the responsibility of handling the management of industry in a genuinely scientific way, which means in the first place the getting of relevant information. In practice it is quite impossible to obtain thorough information about the question by the time it is wanted. Not enough permanent statistical organizations are at work collecting facts, although these organizations are on the increase and are doing useful work. But the chief difficulty arises always from such fundamental questions of merit and comparative standards of living as have been mentioned.

Far wider questions also complicate the task of adjusting industrial disputes. The right of any industry as a whole to a certain share of the social income is debatable. Shall it be allowed to raise its prices or its rates in order to secure a wage increase for its employees? How shall the various industries be fitted in and made to coöperate and to share in expense and reward? Again, there is the consumming public to be considered. Employer and employee in any given dispute are only two of the factors involved. In most cases at present, the consuming public is helpless and silent. Often consumers are regarded by the parties to this dispute as the legitimate sources of greater profits for the employers and greater wages for the workers, that being the easiest way to settle the affair.



Dressmakers'
GENERAL STRIKE
DECLARED
To-day, Tuesday, February 4th, at 10 o'clock in the morning

PROMPTLY AT 10 o'clock this morning, Tuesday, February 4th, 1930, the GENERAL STRIKE IN THE DRESS INDUSTRY BEGINS and will be continued until the manufacturers, jobbers and contractors will concede to the just demands of our Union and the sweat shops will be eliminated.

All dressmakers, cutters, operators, finishers, pressers, examiners, drapers, sample-makers and cleaners are called upon to leave their shops promptly at 10 o'clock this morning and to proceed together, each shop as a group to the halls assigned to them by the General Strike Committee.

Leave your shops in orderly manner and proceed to the strike halls in perfect discipline.

SISTERS AND BROTHERS:

The time has come, the hour has struck for all dressmakers to prove to the employers their determination to establish decent standards and humane conditions in the dress industry.

This is one of the most important days in the lives of the dressmakers. Your united action today will bring substantial improvements to you and your dependents.

During the last few years, the employers utilized the disorganization of the workers to demoralize the industry. They have imposed upon you long hours, low wages, the sweat shop and all its humiliations.

THIS GENERAL STRIKE IS CALLED BY OUR UNION TO ESTABLISH THE FIVE-DAY FORTY-HOUR WEEK, MINIMUM SCALE OF WAGES, THE RIGHT TO THE JOB, TO PLACE RESPONSIBILITY UPON THE JOBBER FOR CONDITIONS IN CONTRACTING SHOPS AND TO ELIMINATE THE MANY SWEAT SHOPS AND WIPE OUT SWEAT SHOP CONDITIONS.

Today is the beginning of a new day. The dawn of a new era in the lives of the dressmakers.

Today we will again establish ourselves as a strong, powerful and constructive force for decent and humane conditions for all the dressmakers.

CLOSE YOUR RANKS, DRESSMAKERS !
ON WITH THE FIGHT ! ON TO VICTORY !
LONG LIVE THE INTERNATIONAL LADIES' GARMENT WORKERS' UNION!

General Executive Board, International Ladies' Garment Workers Union,
Joint Board Cloak, Skirt, Dress and Reefermakers Union,
BENJAMIN SCHLESINGER, President.

6. *Progress toward the Adjustment of the Conflict*

Notwithstanding all these difficulties, attempts are being made to perfect machinery of adjustment. Labor boards, national industrial councils, and other tribunals are being organized with greater or less powers of enforcement. The National Industrial Council, for example, has been organized to obtain joint action between representative organizations of employers and workers, to prevent and adjust industrial disputes, and to serve as official consultation authority to the government upon industrial relations. The English plan known as the Whitley Scheme provides for an elaborate mechanism of adjustment within each industry. There is proposed a complete hierarchy of councils from the small Works Committee which represents the management and workers in a particular plant up through the District Council, representing both union and employer in a district, to the Joint Standing Industrial Councils of the nation. These committees, it is hoped, will be able to deal with questions of hours, wages, and conditions as they arise, to provide security and continuity of earnings, and of employment, and to provide for technical education, training, and industrial research. They are to consider proposed legislation affecting the industry.

In spite of general failure in the social adjustment of these matters up to the present, it appears that there is no road open except forward—that is toward perfecting the only available mechanism. The only other way is to move backward toward dependence upon irrational combat; and even where this is desirable, the steady trend of social forces seems to be toward rational collective adjustment. It is doubtless impossible and undesirable to attempt thorough and absolute compulsory arbitration at the present time; but there is no reason why standing bureaus cannot be created to obtain relevant information upon industrial disputes. This requires, it is true, considerable expenditure of public funds, but the value of the information may be expected to more than compensate for this expenditure. There is no obstacle, other than a general fear of all governmental activity, to the creation of standing councils which shall have power if not to enforce decisions, at least to bring disputes into public view and to deal with them in the most rational possible way. We cannot wait for the settlement of such abstruse moral issues as the relative rights and merits of various members of society. The wheels of industry must turn and a certain amount of disposition to compromise must be assumed. In time experience and practice may work out tested precedents and policies for certain settlement of typical maladjustments. The case is quite analogous to that of government in general. No system of parliaments or congresses will succeed in settling in advance all disputes and problems, but let a flexible and efficient mechanism be established and disputes can be taken out of the realm of force as they arise and given over to the control of intelligence, moderation, and common sense.

CHAPTER 41

THE COÖPERATIVE MOVEMENT

1. *Meaning and Significance of Coöperation*

The term coöperation itself means, of course, "working together." It has its significance from the highly social nature of our present institutions and arrangements. We have to work together as things are in our society. Working together, however, may be voluntary or it may be involuntary. In a certain sense most of our activities at the present time are involuntary. That is to say, there are certain pressures upon each individual in the industrial system, such as fear of want or such other more direct pressures as the subjection to an employer or his representative, the foreman. These pressures practically force certain particular activities upon the individual. Coöperation intends to supplant all these forced activities by voluntary ones, ones in which men engage with enthusiasm and in a spirit of friendliness. There are a number of concrete molds into which the general impulse toward the coöperative movement has run and it consequently has several shapes for analysis, as we shall later see. But this voluntary, democratic impulse lies behind them all and gives the coöperative movement as a whole meaning and significance.

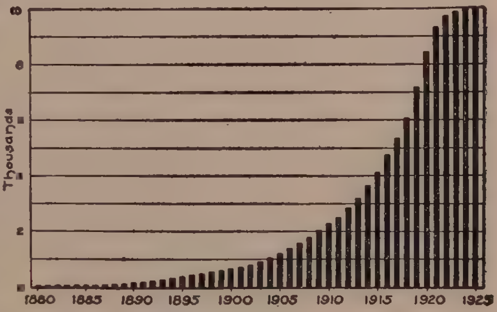
(Courtesy Coöperative League of America.)

To a great many people coöperation seems to be a sufficient social philosophy. In it they seem to see hope for the regeneration of the social order; and so it deserves our critical attention. It may, as we shall see, apply to both the activities of producing and those of using goods. Its essence, however, whether in producing or in consuming, lies in the free affiliation of individuals in local groups with like interests.

It is true to say that the word coöperation has itself within the past few years taken on a new significance to many people in the United States. It means more than simply working together. It means concretely an instrument which may be used to lighten the burden of high prices and low wages through the elimination of the middleman and his profit and through the management of the affairs of business enterprise by the individuals to whom the services are rendered. Thus, it eliminates not only unnecessary costs but also profits. Its distinguishing feature is that it exists for the common good of all its members. All property acquired becomes common to all the members.

In general, the movement has had far greater success abroad than it has had in the United States. This may be said to be due in part at least to the nature of the civilization there. In Europe there is a more settled way of life. There is less shifting of population. The United States has long been the land of opportunity in which life is more or less an adventure. At least we inherit that tradition. And it is true that the pressures here have not been so great and the standard of living has been consistently higher. No one has cared particularly to protect his status because he hoped that it might change overnight; and often, indeed, it did. The commonest fairy story in the United States is that of the farmer lad who rises to be the great captain of industry.

This seems sufficient to account for the partial failure of coöperation in the United States. And the fact that in Europe there has been more need to obviate private profit because life was lived on closer margins, seems sufficient to account for its success there. But then, too, there has been a rapid increase in efficiency in the whole world of business in the United States and this efficiency has taken the direction of organization on a large scale; so that no local small group could hope to compete on even terms with great chain stores, for instance, or with department stores or mail-order houses, even though these concerns did maintain wide margins of profit. The coöperatives abroad got off to a better start and grew along with private business so that the wholesale societies in England were able to compete on even terms with private businesses because they were just as large and could make just as many economies of operation.



A graphic representation of the recent growth of the coöperative marketing movement. (Adapted from U. S. Department of Agriculture *Year Book*, 1925, p. 405.)

2. *Classification of Coöperative Enterprises*

Coöperative enterprises have taken a number of different forms which may be classified roughly as follows:

1. Coöperative credit and banking associations.

2. Coöperative associations for production—raw materials or finished products.
3. Associations of producers to sell coöperatively either raw materials or finished products.
4. Coöperation for consumption.

These classes may and do overlap in practice. It may be that a credit institution may also function for producers in selling their product or for consumers in buying supplies. The consumers' association may also have banking and insurance departments. It may undertake coöperative production of supplies. Or the former association may in addition to its primary function as a marketing agency for its members, undertake to supply them with the necessaries of home and farm.[1]

Home of the Rochdale Coöperatives. It was here that, in 1843, twenty-eight weavers of Rochdale organized the first modern coöperative. (Courtesy *Locomotive Engineers Journal*.)

Taken the world over, consumers' coöperation is of more importance than any other type so far, though in particular places there have been great developments of coöperative credit societies and of societies for the marketing of some special product, such, for instance, as the citrus fruits of California.

3. *The Consumers' Coöperative Movement in the United States*

It is generally acknowledged that the coöperative movement began in 1844 in England when twenty-eight flannel weavers of Rochdale organized the first association. The United States was one of the first countries to follow the lead of the Rochdale pioneers, as they are called. The first workers' coöperative organization in this country was probably established in Boston in 1844. Out of this club grew the powerful New England Protective Union which flourished for a while but was disrupted by internal quarrels and finally superseded by a society called the American Protective Union. This society established, before it failed, some seven hundred stores in different parts of New England.

During the early seventies in the United States, the Patrons of Husbandry, a farmers' order, established a number of coöperative stores, some of which still exist. In 1874 a purely coöperative organization, the Sovereigns of Industry, was established. This association opened stores all through the North Atlantic states but failed in 1879 through poor business management.[2] Later on, the Farmers' Educational Coöperative Union spread from Texas, where it was organized in 1902, into nearly every state. It is particularly strong still in Kansas where there are at the present time some seven hundred and fifty coöperative societies conducting retail stores.

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[1] Florence E. Parker, *Consumers' Coöperative Societies in the United States in 1920.* U. S. Bureau of Labor Statistics, Bull. No. 313.

The Farmers' State Exchange at Omaha, Nebraska, is a single wholesale house doing a business of three million dollars a year and dealing in all kinds of produce. Kansas and Nebraska may now be said to be the greatest coöperative states in the union.[3] In Kansas there are three hundred societies which operate retail stores and also conduct exchanges for the sale of hay, coal, fertilizer, seeds, and farm machinery, and for the marketing of produce. There are also in Kansas many coöperative grain dealers. Several societies own their own flour mills. The total business of the six hundred societies of the Kansas Union in the year 1919 amounted to two hundred millions of dollars. Iowa has about three hundred societies operating retail stores. Missouri and Oklahoma have one hundred distributors' societies each, and rapid development is reported to be taking place in all the states of the Middle West; and this development is particularly rapid in the northwestern states, Wisconsin, Minnesota, the Dakotas, and Montana. In the United States, as a whole, there are about 1800 consumers' coöperatives: 400 grocery stores; 1,000 general stores; 300 oil stations; 30 boarding houses and restaurants; 20 bakeries; 10 housing societies; 10 milk associations; 10 coal companies; 30 buying clubs among farmers. Average membership in the consumers' coöperative societies is between 200 and 300. Ninety per cent of the societies are less than 10 years of age. The Franklin Coöperative Creamery Association, Minneapolis, Minn., with 5,000 members, has the largest turnover sales in 1928 being $3,410,400. The

Farmers' coöperative laundry, River Falls, Wis., erected in 1914; present value of plant, $15,646. A business of $491 done in 1914 had increased to $27,483 in 1927, of which $1,302 was profit. (Courtesy U. S. Dept. of Agriculture.)

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[2] *Op. cit.*, p. 2.

[3] James P. Warbasse, *The Coöperative Consumers' Movement in the United States*, 1920.

second largest in the volume of sales is the Coöperative Trading Company of Waukegan, Ill., which has stores, a bakery and a milk department, with sales of about $680,000. Close behind this comes the Soo Coöperative Mercantile Association, Sault Ste. Marie, Mich., with sales of $646,000 in its bakery and eight stores. The Consumers' Coöperative Services of New York, with a bakery, eight restaurants, a credit union and a library, has annual sales of $611,000. More than a half a million members in 936 coöperative societies are reported by the Canadian Department of Labor in its annual report for 1929, which gives a list of coöperative societies of various kinds operating in the Dominion. The societies are divided as follows: 70 Productive societies, with a membership of 51,097; 357 Marketing cooperatives, with a membership of 313,049 (in this group, of course, the wheat pools lead, with 140,000 members); 11 Productive and Marketing societies, with 3,337 members; 291 Distributive coöperatives, with 19,278 members; 16 Marketing and Distributive societies (including the United Farmers Coöperative Company and the United Grain Growers), with 58,261 members; 183 coöperative Credit and Savings societies, with 41,072 members; and 286 societies, with 26,741 members are listed as miscellaneous associations. This will perhaps give some idea of the extent to which coöperation has developed in North America, though it is but a partial description. It will appear as having formidable possibilities, at least, though the proportion of our total business it carries on now is very small.

It might be well to summarize the characteristics of this consumers' movement in the United States, as follows:

1. *Unrestricted membership, with capital shares of low denomination which may be paid for in installments.* This is an important feature. Since the coöperative movement is above all a movement of the working classes, it is essential that the financial undertaking be made easy and within the workingman's needs.

2. *Limitation of the number of shares to be held by any one member.* Members of means are not excluded, but in order that democracy may prevail, it is well that there should be no wide inequality in the members' financial standing in the society.

3. *Democracy in government, with officers elected by and responsible to the members, and each member entitled to one vote only, irrespective of the number of shares he holds.* This feature immediately eliminates any tendency toward control of the society by the more well-to-do members, as in the stock company.

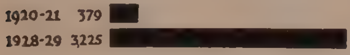
4. *Sale of goods at prevailing market prices.* It is the policy of coöperative societies to sell only pure goods and as far as possible only goods produced under favorable working conditions. For this reason "Union Label" goods are in demand by coöperative societies, since the label is a guaranty of production under fair wage and working conditions. Prevailing market prices are charged, for two reasons: Under the "cost-plus system"—sale

at cost, plus a small percentage estimated as sufficient to cover expense of management, handling, etc.—it is next to impossible to foretell accurately what the expense will be, and the slightest miscalculation leads to the failure of the store, since there is in the very nature of the plan no reserve to fall back on. Again, price cutting at once attracts the attention and arouses the hostility of the private dealer; it is also unnecessary since the purpose of price cutting can be accomplished through the return of the patronage dividend.

The coöperative grocery store of the Amalgamated Coöperative Apartments in New York City. (Courtesy Amalgamated Clothing Workers Union.)

5. *Cash sales to avoid the loss attendant upon the extension of credit and to enable the society to make the best use of its capital.*

6. *Return of dividend to each member, not on the stock held, but in proportion to the amount of business he has done with the store.* The dividend is the member's share of the "Net residue," that is, of the sum remaining after the deduction from the trading surplus of the amounts to be set aside for educational purposes, reserve, and depreciation fund. The dividend is computed not upon the share capital but upon the total sales, and is distributed in accordance with the amount purchased by each member. It is evident that the member's patronage, not the money he has invested in the store, determines the amount he receives in dividend. This feature is peculiar to the coöperative movement. Thus the member whose trade at the store has amounted to $100 during the quarter would receive on a 6 per cent rebate, $6.[4]



Coöperation can evidently find favorable environments even in America. Growth in membership of "Our Coöperative Cafeterias," New York City. (Data from Consumers' Coöperative Services, Inc.)

4. *Producers' Coöperation* [5]

Even the representatives of the coöperative movement pretty generally admit that producers' coöperation has failed in the United States, as indeed, it has done throughout the world. The reason for this seems to be that whenever a group of workers organizes on a purely productive basis their interest tends to become concentrated upon how much more they can earn, and they therefore come into direct competition with the capitalist producers who are intent upon the same purpose. In an industrial system which is operated for a profit, there would seem to be no reason for affiliation with a *group* of producers; for if an individual happened to be exceptionally able he could separate himself from the rest and do far better individually. The result generally has been that producers' coöperatives, appealing to the same motives as capitalist organizations, have failed to keep the people of greatest ability among their number and so were eliminated by the operation of competition. The general result has been that groups so organized either failed or became distinctly capitalist enterprises; or, if they did not fail, and did not develop a capitalist spirit, they were taken over, one by one, by the consumers' coöperative associations.

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[4] Florence E. Parker, *op. cit.*

[5] Agricultural marketing associations are not discussed here, sufficient attention having been given to them in Chapter 8. They are, however, the only genuinely successful associations in the production field. The others, devoted to factory organization, have almost uniformly failed.

The Franklin coöperative creamery in Minneapolis shows what coöperation can accomplish, given the right start. It is one of the most efficient plants of its kind in the United States and does a business of some three and a half million dollars a year. (Courtesy Coöperative League of America.)

The last of the self-governing workshops surviving in Great Britain are being bought out, according to J. P. Warbasse, by the Coöperative Wholesale Association.[6] Many coöperative organizations have been organized in the United States but every one of them has failed. The Workingmen's Protective Union, the Sovereigns of Industry, the Patrons of Husbandry, and the Knights of Labor are all organized coöperative producers' enterprises. Printing societies, iron foundries, cloth mills, glass factories, laundries, clothing factories, and box factories, have all been organized coöperatively and failed.

Another form of coöperation sometimes erroneously called producers' coöperation has, however, been successful. This is the production program carried on by the British wholesale coöperators who maintain factories for the manufacture of a number of products. They own some famous wheat lands in Canada, many factories, such as soap and jam works, and even operate tea plantations in Ceylon; but this is not true producers' coöperation. The people who work in the factories are merely the employees of the consumers of the goods; and the two should not be confused.

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[6] *Producers' Coöperative Industries*, 1921.

5. *Coöperative Credit Associations*

A field in which coöperation has functioned perhaps more successfully than in any other with the exception of consumers' coöperation is that of coöperative credit societies. These societies cannot be discussed here in any detail because of the intricacy of their operations. Such a discussion would lead us into a discussion of the whole field of banking theory which we must avoid. It will perhaps be sufficient to say that they comprise two classes of members, borrowers and lenders, both often merged in the same individual and both treated with equal justice in the distribution of the profits of the society. Each member must hold at least one share of stock in the association and each may hold more, the par value of the shares being so low as to keep out no one otherwise eligible for membership. Regular rates of interest are paid on deposits and are charged on loans. Depositors do not receive high rates of interest on their money and borrowers avoid paying high rates to money lenders.[7] These societies differ from regular commercial banks in four important particulars:

1. They are organized and managed primarily in the interest of borrowers.
2. The par value of the shares is small and may be paid for in weekly or monthly installments of a few cents each.
3. Small loans are preferred to large ones.
4. Other collateral being lacking, good character is occasionally accepted as security for a loan.

The origin of these societies is usually credited to Herman Schulze, a graduate of Leipzig University in Germany and a judge in a provincial court in his native town of Delitzsch in Prussian Saxony. He was greatly affected by the deplorable condition of the working class in his province following the famine of 1848 and he originally organized an association for the purpose of buying raw materials at wholesale and selling them to members at cost. Following this he tried to evolve a plan for raising capital for persons without money, or to give them credit safely without security. In 1853 he organized the first coöperative society providing for the creation of a fund by the contribution of members alone. The rest of his life was almost wholly devoted to propaganda in the cause of coöperative credit associations. As a result of this the number of societies rapidly multiplied in Germany.

An adaptation of the Schulze-Delitzsch societies was worked out by Friedrich Wilhelm Raiffeisen, who as burgomaster of Weyerbusch, an inhospitable region of small farms in the Rhineland, had noticed the inability of the half-starved peasants to make a living following the drought of 1846–47. He believed that the suffering of the peasants was largely due to the terrible usury practiced by money lenders, and so he organized a society to sell the peasants bread and cattle at cost. Somewhat later he organized a credit and loan association to loan money to the peasants at reasonable rates of interest. It was in 1862 that he organized at Anhausen a society in which he united the coöperative banking plans of Schulze with his own plan of distribution. His idea has spread rapidly until today societies on the Raiffeisen model have spread throughout Europe, confined largely, however, to rural districts. The first attempt to establish a credit association in the United States was in 1870 when Josiah Quincy and other prominent men of Boston petitioned the legislature of Massachusetts for a general law allowing the incorporation of the coöperative banks on the Schulze-Delitzsch plan then attracting so much attention in Europe. A bill was introduced and failed of passage, but in the meantime, extensive information concerning credit associations was published in various journals and in 1892 the United States Department of Agriculture issued a detailed description of the working of the Schulze and Raiffeisen societies. In 1900 a coöperative people's bank was founded at Levis in the Province of Quebec, Canada. The first credit association in the United States was founded in 1908 at Manchester, New Hampshire, by French-Canadians who had emigrated from Levis, but since that time the development of such associations has been rather rapid. Two other occurrences are mentioned by Mr. Whitney[8] which drew attention to the credit coöperative. The first of these was the Report of 1908 of the Country Life Commission, appointed by President Roosevelt, which found a lack of agricultural credit facilities and recommended the adoption of some method of coöperative credit. The second was the report of the National Monetary Commission, which called attention to the superior facilities for obtaining loans enjoyed by farmers abroad. There were many subsequent conferences and commissions, both state and federal, which recommended some kind of action permitting credit associations to be formed, and by 1916 there were eleven states which had passed legislation relative to coöperative credits and paralleling the Federal Act of 1916. New societies were, by 1930, being reported to the Bureau of Labor Statistics as forming at the rate of 20 to 40 per month.[9] For the nine states of Iowa, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Rhode Island, Virginia and Wisconsin, the number of credit unions was, by that time, 540. In six of these states membership data was available for 1928 which showed 193,536 members of whom 96,826 were borrowers. Both in point of societies and membership Massachusetts led, with New York second. Data for loans made during 1928 for New Jersey and New York show in those two states alone a total of $19,192,294 granted. In seven other states loans outstanding at the end of 1928 totaled $14,363,485. These data are fragmentary, but the rate of increase is obviously impressive.

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[7] Edson L. Whitney, *Coöperative Credit Associations in America and Foreign Countries*, Bureau of Labor Statistics, U. S. Dept. of Labor, Bull. No. 314.

On the whole it would seem that some such movement for coöperative credit is likely to find a congenial atmosphere in the United States and that there will probably be considerable development in this direction in the coming years. The recent agricultural depression and the consequent Intermediate Credits Act, as well as the measures taken by some of the states of the Northwest, notably North Dakota, to relieve the financial situation of the farmers, give adequate reason to believe that once the possible contribution to rural life of credit associations becomes known their development will be very rapid. They may well develop also as an adjunct of labor unions in urban centers: in fact their greatest growth in the United States has been urban—an interesting contrast with their almost wholly rural character in Europe.

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[8] *Op. cit.*, p. 19.

[9] *The United States Daily*, Feb. 14, 1930.

6. *World-Wide Extent of the Coöperative Movement*

During the summer of 1923 Chairman Huston Thompson of the Federal Trade Commission and Dr. William Notz, Chief of its Export Trade Division, visited fifteen countries of Europe and personally investigated various coöperative organizations. Interviews with their representatives were supplemented by detailed examinations and investigations of farms, dairies, mills, stores, warehouses, banks, and educational agencies of various coöperative societies. On their return to the United States they issued a report concerning their investigations, in which it was made clear that they had been very greatly impressed with the importance and magnitude of the coöperative movement abroad. For it appeared that more than 285,000 organizations in all parts of the world were connected with it and that the total membership probably included thirty or forty million persons. And since each individual member represented a family, probably no less than 120,000,000 people were definitely linked up with the movement.[10]

In some of the larger countries of Europe like the United Kingdom, Germany, and France, the consumers' coöperative societies, they found, rank among the largest producers and distributors of the necessaries of life. In England and Germany nearly half of the population is affiliated with the consumers' wholesale and retail societies. In Czechoslovakia they estimated that about eight million people are directly interested in coöperative enterprises. The farmers of Finland owe their present economic prosperity primarily to coöperation. By establishing coöperative consumers' stores throughout the rural districts, Finnish coöperators have performed a valuable service to the farmers of that country. In that way they have brought city and country life closer together, made accessible to the farmer the things which he needs for his household, and given him new facilities for marketing his crops and for the purchase of new materials for operating his farm.

In the new Baltic states the credit necessary for agricultural development was procured in the main through the agency of local coöperative credit societies. The flourishing butter, cheese, bacon, and egg export trade of

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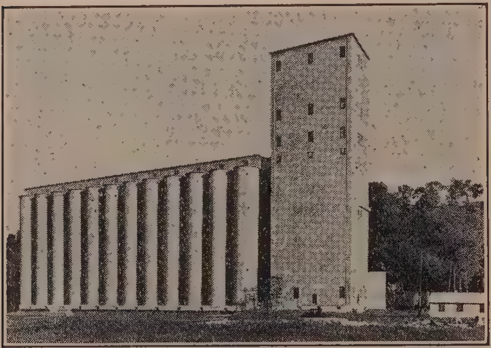
[10] The information that follows is largely based on that report.

Denmark and Holland rests on the farmers' coöperative societies in those countries. The work of Sir Horace Plunkett and of the Rev. T. A. Finlay in Ireland for the uplift of agriculture through coöperative methods have attracted wide attention. The web of coöperative societies which binds together the peasants of Russia proved the important factor which resisted complete economic disintegration in that vast country after the debacle of 1917.



This is the new terminal elevator owned and operated by the Southwest Coöperative Wheat Growers' Association. A number of the large-scale grain marketing coöperatives are now acquiring similar country and terminal storage elevators.

While all classes have shared in the advantages of coöperation in the various countries of Europe, it is mainly the urban wage earners' families and the middle classes generally as well as the population in the agricultural districts which have attached themselves to the coöperative movement.

An idea of the volume of business done by the coöperative consumers' societies may be gained from the money value of the sales by retail societies in seventeen of the leading countries of Europe, which in 1914 amounted to $761,429,996, while the sales of the wholesale societies in the same countries for the same year amounted to a total of $312,790,674. Since that year the volume of goods handled by the same organization has increased many times.

As an instance of the success of coöperative agriculture, the work of the coöperative agricultural movement in Ireland may be mentioned, with its total turnover of more than $500,000,000 from 1889 to 1922, inclusive.

One of the features of the coöperative consumers' societies is the return of a greater part of the profits in the form of dividends to the members in proportion to their purchases. The large aggregate savings effected in this way may be illustrated by the fact that the net surplus of the retail consumers' societies in the United Kingdom in 1922 amounted to approximately $70,000,000. As a further example the societies affiliated with the Union of Swiss Consumers' Societies may be cited, which had a net surplus of 14,455,218 francs in 1921, of which 12,510,824 francs were distributed in the form of dividends.

A further feature of the European coöperative system of distribution consists in the successful elimination of unnecessary middlemen's profits through the distribution of goods directly from the producer to the ultimate consumer. Most retail societies are members of a coöperative wholesale and obtain their stock of supplies from the latter. Some retail societies and most wholesale societies manufacture a large part of the goods handled by them. Members of retail societies therefore practically obtain their goods at the cost of production plus a small charge for distribution.

The large volume of business done by the consumers' coöperatives makes them a powerful and in some cases the dominant factor in the price market. Although they usually sell as a matter of coöperative policy, at prevailing market prices, they aim to keep prices down to a reasonably low level of profit. This is in accord with their self-interest as purchasers and ultimate consumers.

It is to their interest to follow the market up to a certain point, because they return the additional charge in the form of dividends, and at the same time avoid competition in price with the retailer. If, however, prices get too high, the consumers' coöperatives are likely not to follow the market for the reason that excessive prices will decrease the demand and reduce sales.

In this respect in some countries the policies observed by consumers' coöperative societies and by farmers' coöperative sales societies do not always harmonize. Not infrequently the interests of the one party, being primarily producers, tend toward high prices, whereas the interests of the other party, the consumers, call for lower prices. Conflicts along these lines have caused a number of large retail consumers' coöperative societies to establish milk distributing plants and dairies of their own in order to make themselves independent of milk producers' rings. The nearest approach to a working-together of agricultural producer and agricultural producers' coöperatives has been reached in countries where agricultural commodities are produced for export. Under those conditions it has been found practical for agricultural coöperative societies to form export federations and sell their products to the wholesale importing societies of another country. Thus the Danish central export federations have for many years been regular suppliers of the English Wholesale Coöperative Society; and the German wholesale societies prior to the war imported butter from the coöperative export federations of Finland and Siberia. Considerable progress has also been made in Switzerland in establishing a closer working-together of the consumers' societies and the agricultural coöperative producers' organizations. In Freiburg-in-Baden the local consumers' and the farmers' coöperative societies jointly operate a market where the local consumers can supply themselves with fruit and vegetables.

Successful efforts to harmonize opposing elements have been made in Finland. There the coöperative consumers' societies of the cities make it a point to teach the rural coöperatives the need of united action for the general welfare of their country. A helpful influence in bringing urban and rural elements together is exercised also by the various central unions and federations of coöperatives in other Baltic states, in Czechoslovakia, Germany, Switzerland, and elsewhere.

7. *Recommendations of the Federal Trade Commission*

It was on the basis of the foregoing facts that the Federal Trade Commission was led to make the following recommendations in 1924 concerning coöperation:

> The Commission recommends consideration of the following features of the coöperative movement in foreign countries, with a view to their application in the United States, so far as they may be compatible with the economic and social conditions of this country. Due consideration should be given to the fact that coöperative methods which have proved successful elsewhere may not, under conditions as they exist in this country, be wholly adaptable.
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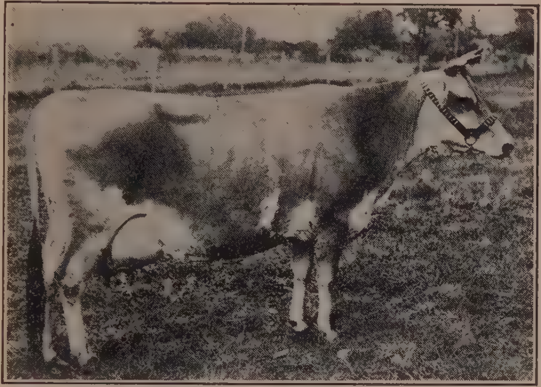
> 1. Farmers' coöperative sales societies for marketing agricultural produce as directly as possible from the farm to the urban household. As an aid to such a system of distribution the establishment of numerous coöperative warehouses and elevators, where produce from the surrounding country is assembled, stored and shipped, is recommended. The joint purchase of farm supplies (seeds, fertilizers, implements, etc.) is carried on successfully by numerous foreign agricultural sales coöperatives. It is believed that the operation of wholesale agricultural purchasing societies covering larger geographical areas, such as states, should be studied and where the demand for them is clear, should be encouraged.
>
> 2. The simple, elastic and inexpensive system of rural credit societies of the Raiffeisen deposit and loan type, adapted to local conditions and needs, managed by the farmers themselves, limited to small areas, but with a centralized auditing system and central banks for diverting funds from one section to another as needed. It is believed that a greater development of the coöperative credit system in rural districts would materially promote thrift, self-help and teamwork, draw in considerable unused wealth of the countryside and make it available for credit purposes.
>
> 3. The distribution of electric power in rural communities through farmers' coöperative societies has proved so advantageous in Europe that a greater development of this means of furnishing light, heat and power to the American farmer is recommended for the consideration of our farmers.
>
> 4. It is recommended that the establishing of retail consumers' coöperative societies be promoted in the thickly populated rural districts of the United States.
>
> 5. Coöperative distribution of household coal is looked upon in some of the leading coal-consuming centers of Europe (among them London, Manchester, Edinburgh, Glasgow, Hamburg, Prague) as the best solution found thus far for keeping down the high cost of household fuel. The English Wholesale Coöperative Society handled about two million tons of coal last year which it bought at wholesale prices and transported in its own coal cars from the mines to the coal depots of its retail societies. In this way the distributing cost of coal from the mouth of the mine to the bin of the household consumer was reduced to a minimum. Similarly the distribution of motor fuel through coöperative societies has been carried on with success in a number of foreign countries.
>
> 6. The distribution of milk by consumers' coöperative societies in certain large cities of Europe, notably Basel and Belfast, has met with the well-nigh universal approval of the populace. Unreasonable price increases have been prevented thereby, and a supply of milk of good quality and handled along approved sanitary

lines has been assured. In both cases mentioned, the coöperative consumers' societies, in addition to procuring a part of their milk supply from farmers' coöperative milk-producing societies, operate dairy farms of their own. The problem of the milk supply of Basel, in particular, has been solved by the joint action of the local consumers' society and the farmers' coöperative dairies under the supervision of the municipal authorities.

7. It is believed that through the agency of coöperative export associations the market for American farm products could be substantially enlarged in foreign countries, just as the farmers of Denmark, Holland, Finland, Czechoslovakia and Esthonia have succeeded in developing remunerative oversea markets for their products by coöperative methods.

Attention is called to the Export Trade Act (Webb-Pomerene Law) which may offer advantages for marketing American agricultural products in foreign countries. Under this Act, any association or combination, by contract or otherwise, of two or more persons, partnerships or corporations, may be organized for the sole purpose of engaging in export trade from the United States or any territory thereof to any foreign nation.



Coöperation has a wide possible scope in the dairying industry. From the ownership of herd-sires, to the actual manufacturing and distribution of milk-products, great progress in coöperation is being registered. No other method seems so likely to bring the standards of poor herds up to those of the best as coöperative ownership. This is a world's champion cow: Darlings' Jollie Lassie. She produced 16,425 pounds of milk and 1,141.28 pounds of butterfat in one year: a world's record for the Jersey breed. American farms need more such cows and fewer "boarders," as cows are called who fail to earn their keep.

Through such an organization they can seek markets for their surplus production and keep overhead expenses down to a minimum.

8. In various foreign countries efforts are being made to bring about a greater degree of decentralization of power and administration in coöperative organizations. A study of the possible drawbacks arising out of overcentralization would, it is believed, open the way for more efficient methods in the field of coöperation.

8. *The Significance of Coöperation*

It will be seen that coöperation is a movement of such wide extent and such formidable proportions that it cannot be dismissed as merely a Utopian dream. It is a very potent present force in world affairs. In a sense it harmonizes very well with the general aspirations of the peoples of the world in their movement toward greater democracy, and greater localization of the control of social functions; for the very fundamental principle of coöperation is that each individual in it shall have an equal say with every other individual concerning the policies proposed and the operations carried on. It would seem impossible to say whether it is likely that coöperation will develop sufficiently so that in the long run consumers will be pretty universally affiliated with coöperative distributing societies: but it does not seem at all unlikely that such a situation might in time come about. If it does, there has to be considered the conflict which might arise between these consumers' organizations and the organizations of producers, whether these were organized on the present capitalistic basis or whether they took a more socialistic turn as they seem to be doing at present with the general movement toward combination and the increase in size of the units of industry. This conflict, however, could scarcely engender more difficulties than exist at present in the field of production and distribution of goods and might, by giving each individual in society a voice in both producing and consuming functions, tend to reduce the friction existing at present.

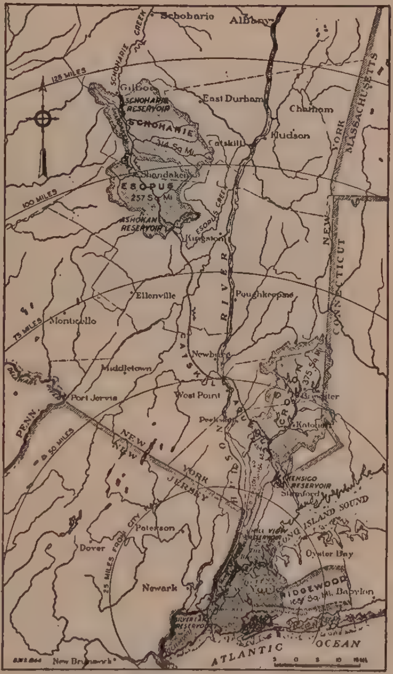
A labor union's adventure in coöperative housing. The whole group contains 1,185 rooms and there are 14,000 feet of floor space alloted for communal purposes. Less than half of the ground space is occupied by buildings; the remainder is in lawns and play-space for children. (Courtesy Amalgamated Clothing Workers Union.)

Comment on the failure of producers' coöperative societies to function successfully as compared with the success of consumers' coöperatives would necessarily seem to take the general direction of explaining it by saying that it was too premature, that voluntary association is a highly civilized procedure and one which is carried out successfully only in highly developed societies in which the institutions are fairly well fixed and the level of intelligence and education high. It would seem that if producers' coöperation is to develop it will go slowly and will probably develop out of the present tentative rearrangements being made in the world of production to allow the individuals who actually operate industry more and more voice in the management of affairs. It may be that producers' coöperation will be successful yet.

CHAPTER 42

GOVERNMENT OWNERSHIP

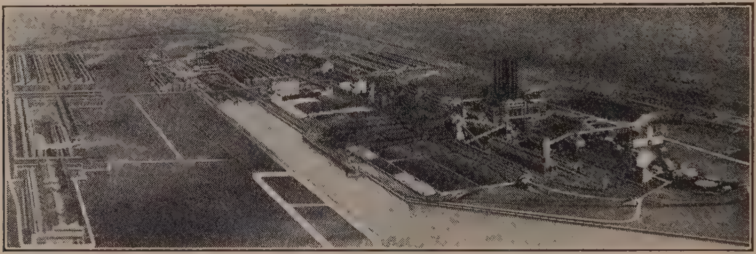
It is a sign of the strides made in recent years toward collectivism that government ownership as a general principle no longer wears the horrifying socialistic aspect that it once wore. People thoroughly convinced of the desirability of retaining capitalism as a general system, and even convinced of the desirability of free competition on the whole, tolerate the extension of government ownership in some areas of industry. Complete government ownership of the means of production means socialism; this we shall consider in the next section; while government ownership is a principle which may be extended over part but not all of the nation's industry. There is practically no one today who denies the advisability of some government ownership, but there is a very real question as to how far it is desirable to continue extending it. The question involves not only industrial efficiency but much broader social and political issues.



Such vast, long-run projects as water supply and sewage disposal systems are financed from public funds secured by taxation. This is a map of the Catskill Water Supply, one of New York City's chief sources. (Courtesy of Catskill Water Supply, Board of Water Supply, N. Y. City.)

Industry may be highly concentrated and still remain under private direction. But the fields where government ownership seems most practicable are naturally the fields where concentration has spontaneously developed to the greatest extent and the fields where centralized control is obviously easy. National ownership of army and government equipment is effective because of the high degree of centralized organization in these systems. It is effective also because the controlling interest in the direction of these enterprises is that of the whole nation as a unit rather than any particular group. Likewise the interests of the nation as a whole are peculiarly identified with the postal system. It is an enterprise which necessitates a uniform and widespreading centralized organization. At the other extreme are such enterprises as handcraftsmanship and the fine arts. Here centralized coördination would be impossible and obviously dangerous. These are activities which depend upon the personal factor and in them individual variation must be allowed to have free course. Attempts at governmental regulation of them have been made in the past under the medieval guilds and under strong despotisms. Such regulation has at times produced creditable fruit, but there is a strong demand today that they be unhampered.

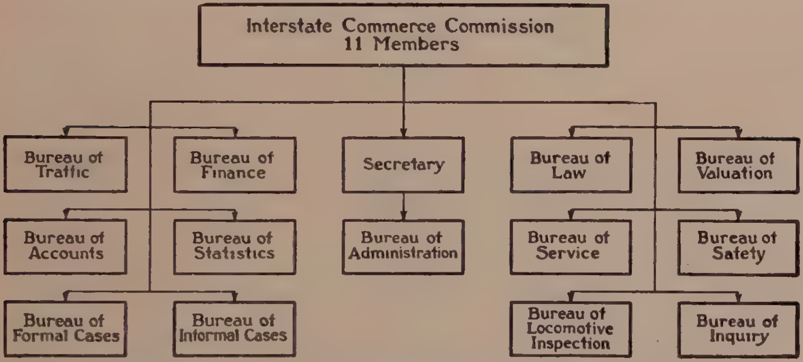
The field of retail trading seems at first sight somewhat more capable of centralized management and ownership. It requires no particular development of individual personality. It seems to an indefinite extent capable of reduction to uniform methods and conditions. Yet retail selling demands close touch with the public pulse. The demand, not only of the public in general but of particular sections and small neighborhoods, even of individuals, must be felt and anticipated. Stocks of goods and methods of dealing must be adapted very flexibly to peculiar local difficulties. The conduct of such a business must always be tentative, subject to change from time to time. These are characteristics of a field where centralized ownership and operation might at first be considered impractical. Even these difficulties, however, are being overcome, and there has recently been a rapid development of large control in enterprises whose conduct can readily be reduced to uniform and mechanical operations, where large-scale buying, production, and distribution, are available; and in fields where a central executive group can be in touch with conditions throughout the scope of operations. What sorts of enterprises, then, seem to make government ownership and operation at least conceivable?



The River Rouge Plant of the Ford Motor Company. This organization, with its plant equipment, is a typical example of the rapid and spontaneous growth under private ownership of an industry which lends itself to large-scale operation. (Courtesy Ford Motor Co.)

Large-scale operation and a high degree of centralization have arisen spontaneously in the railroad and coal industries, and in the telephone and telegraph services. To a somewhat less degree they exist in such public utilities as street-railway lines, bus lines, and gas and electric services. One might almost arrange the industries of the country in a hierarchy on these bases. There would be, of course, much doubt as to where to classify certain ones: for example, the automobile industry. As we know, it has reached an extraordinary degree of organization in the case of certain companies, like the Ford and General Motors companies. But it also involves retail selling, and in its manufacturing side its history reveals the conspicuous achievements of past private ownership and inventiveness.

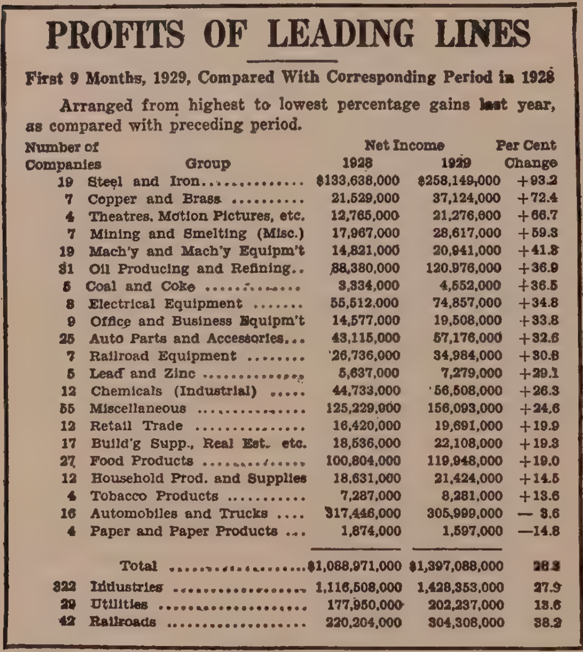
It is upon the coal mines, the railroads, and the great newly developed power systems, that the discussion of national and state ownership and operation has been focused. Here it is possible to have any one of several schemes verging more or less upon collectivism. A railroad, for instance, may be privately owned by a corporation. It may have its own board of managers and be on the whole almost entirely autonomous, yet it may be subject to periodic inspection and regulation by the government as to its rates and other practices. The public has long become used to such general supervision and rarely protests against it as in any way autocratic. The railroad scandals of half a century ago are still vivid in its memory as examples of the irresponsible abuses which can arise when private enterprise is given an absolutely free hand.



An organization chart of our oldest and most important regulating commission.

The first step toward governmental regulation is usually the appointment by local or national authorities of a commission to investigate some specially flagrant abuse, either poor service or unusually high rates. Investigation can be ordered, the courts can compel the firm to open its books, and if fraud or gross mismanagement is found, either criminal procedure or public opinion will compel a temporary adjustment. But the railroads are so vital to the industrial health of the nation that spasmodic oversight is not sufficient. In enterprises of this nature, where the public interest is constantly and vitally concerned, the public has become used to the appointment of permanent commissions such as milk inspection boards and public service commissions.

Then arises the question, How much power shall be given to these boards of regulation? Shall they dictate rates and methods? Here there has been a stubborn battle all along the line between the defenders of free competition and those of collective control. The latter have pointed out the inefficiency and extortion arising from selfish private interests. The individualists have replied with equally convincing examples of municipal or federal corruption and red tape; they have pointed to the history of the development of public utilities and attributed it to the enterprise of individual pioneers. The collectivists have replied that although the creation of these utilities was a matter of pioneering, in their operation now they have become gigantic mechanisms and can henceforth be better conducted socially.



PROFITS OF LEADING LINES

First 9 Months, 1929, Compared With Corresponding Period in 1928

Arranged from highest to lowest percentage gains last year, as compared with preceding period.

Number of Companies	Group	Net Income 1928	Net Income 1929	Per Cent Change
19	Steel and Iron................	$133,638,000	$258,149,000	+93.2
7	Copper and Brass	21,529,000	37,124,000	+72.4
4	Theatres, Motion Pictures, etc.	12,765,000	21,276,000	+66.7
7	Mining and Smelting (Misc.)	17,967,000	28,617,000	+59.3
19	Mach'y and Mach'y Equipm't	14,821,000	20,941,000	+41.3
31	Oil Producing and Refining..	88,380,000	120,976,000	+36.9
5	Coal and Coke	3,334,000	4,552,000	+36.5
8	Electrical Equipment	55,512,000	74,857,000	+34.8
9	Office and Business Equipm't	14,577,000	19,508,000	+33.8
25	Auto Parts and Accessories...	43,115,000	57,176,000	+32.6
7	Railroad Equipment	26,736,000	34,984,000	+30.8
5	Lead and Zinc	5,637,000	7,279,000	+29.1
12	Chemicals (Industrial)	44,733,000	56,508,000	+26.3
55	Miscellaneous	125,229,000	156,093,000	+24.6
12	Retail Trade	16,420,000	19,691,000	+19.9
17	Build'g Supp., Real Est. etc.	18,536,000	22,108,000	+19.3
27	Food Products	100,804,000	119,948,000	+19.0
12	Household Prod. and Supplies	18,631,000	21,424,000	+14.5
4	Tobacco Products	7,287,000	8,281,000	+13.6
16	Automobiles and Trucks	317,446,000	305,999,000	— 3.6
4	Paper and Paper Products ...	1,874,000	1,597,000	—14.8
	Total	$1,088,971,000	$1,397,088,000	28.3
322	Industries	1,116,508,000	1,428,353,000	27.9
29	Utilities	177,950,000	202,237,000	13.6
42	Railroads	220,204,000	304,308,000	38.2

There is a wide range of profits among industries; and also a wide range among various years. This comparison shows the spectacular gains of 1929 over 1928. (From *Annual Statistical Edition*, N. Y. Eve. Post, January 1, 1930.)

Little by little, through bitter legal battles, the right of municipalities to dictate rates and methods to private concerns has been won. In cases of emergency the government has always the constitutional right to exercise its "police power," to intervene to an almost unlimited extent for the sake of public health and security. During emergencies, then, the government has forcibly intervened and the precedent once established has been continued. We now have the principle thoroughly established that subway, street-car, telephone, and other such rates are susceptible to regulation by appointed public boards.[1]

[1] Cf. *The Economic Basis of Public Interest*, 1922.

A board appointed to fix rates for a public utility very soon gets into difficulties. What is a fair or just rate of profits? Statistical investigations [2] have recently demonstrated that there is no such thing as a normal rate of profits for industry as a whole which can be taken as a standard of regulation. Profits vary widely among industries, among firms in the same industry, and from year to year. What would be a fair profit for a given year in a risky industry liable to heavy losses (let us say in the manufacture of clothing novelties) might be an extortionate rate for a stable enterprise such as banking. Even within a given industry, it is very hard to determine what constitutes a fair average rate of profits. Suppose that six per cent is selected as a fair rate for a certain street-car line to earn. Is it fair to restrict to such a per cent the earnings of one company while others in the retail trades and in manufacturing are receiving unlimited profits? The effect of such piecemeal price regulation is often to aggravate rather than to alleviate the trouble. By making one industry an unattractive field for the investment of capital, we deter investors from putting their money there, and our public utility fails to continue progress through lack of funds.

In view of such facts, it is easy to see how a further step toward collectivism may seem advisable. The city may purchase outright the street-car line or build one of its own and operate it by a salaried commission.

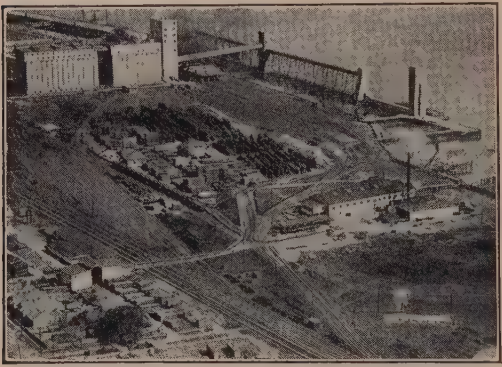
This is the Wilson Dam at Muscles Shoals. There has been much argument in and out of Congress as to whether this government-owned power development should be government-operated or whether it should be leased to private operators. (Courtesy U. S. Army Air Corps.)

The nation may purchase the railroads and operate them. This country, during the war, practiced temporary government operation of railroads, and the experiment has been much discussed as bearing upon the advisability of such practices in future. Unfortunately, the factors involved there were so complicated and so unusual that it is difficult to take that experiment as a test case for government operation in general. In the first place, the success or failure of so vast a national enterprise is not necessarily an indication of the feasibility of smaller municipal undertakings. In the second place, success or failure under abnormal war conditions is not a good criterion. During the war unusual things were demanded of the railroads in the way of transporting goods and troops. Normal business operations were

[2] Cf. David Friday, *Profits, Wages, and Prices* (Harcourt, Brace, 1920).

suspended or altered. There was little time to develop an efficient system on so large a scale. On the other hand, it is urged that war conditions produced an unusual degree of social spirit on the part of executives, and that this caused more coöperation and energy than would be likely to obtain under peace conditions. It has been charged in reply, that those interested in the return of the railroads to their own private owners deliberately hampered successful operation and caused discredit to the scheme as a whole.

In view of those controversies, we are still in the dark as to the possible future efficiency of government ownership of railroads. For all practical purposes, however, the question is now an academic one, at least for some years. Public opinion seems definitely set against continued government operation of railroads for the time being. It balances two possible evils and prefers to run the risk of private extortion rather than of governmental graft; of private inefficiency rather than of bureaucratic red tape.



A municipal warehouse and unloading equipment at the Port of New Orleans. Private enterprise has no monopoly on good planning and efficient management. (Courtesy of Commissioners of the Port of New Orleans.)

Government *operation* is a different thing from government *ownership*. Even if the railroads were taken over and managed by a national board, their ownership might be left in the hands of the present stockholders. This would involve all the difficulties mentioned as to the returning of a fair rate on invested capital and as to the right of stockholders to a voice in management. It has therefore been proposed that the government go more deeply into the enterprise and purchase the railroads outright.

Another difficulty has also led to this proposal: that of the labor disputes upon the railroad lines. During and just after the war, railroad employees felt peculiarly dissatisfied with wages and conditions, and imposed demands under threat of strike which would have paralyzed the nation's industry and worked untold damage. The government under President Wilson was therefore forced to concede to their demands the provisions of the Adamson Act.[3] This was successful as an emergency measure but left unsolved the basic questions of the right of railroad employees to a voice in determining their wages and conditions. The right to strike involves different issues in the case of private and of government ownership. The latter case seems more in the nature of rebellion. In the case of the police strike in Boston public opinion was prevailingly against the strikers, since they struck at the city and the public rather than against private employers, and subjected the people to hardship and danger.

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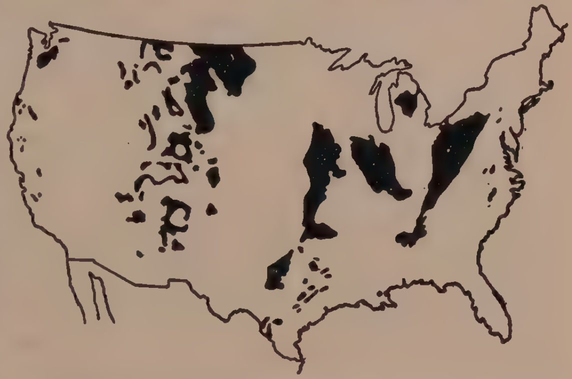
[3] For the provisions of this act see S. Perlman, *History of Trade Unionism in the United States*, pp. 231 ff.

This question still stares us in the face with regard to railroad strikes and those in all vital public utilities. A strike there is more than a private squabble; it is a blow at the whole nation. Yet, we cannot with justice order railroad employees, any more than others, to rest content with conditions which they deem unfair. If the government assumes the responsibility, then, of managing the railroads, it must be prepared to handle labor disputes with justice to all the factors involved: labor, capital, and the general public.

For these two difficulties—profits and labor conditions—a solution was offered shortly after the war in the "Plumb Plan."[4] This plan proposed first to force government purchase of all railroad systems on the basis of capital invested. Naturally, there are many difficulties waiting there concerning the valuation of railroad property, and in the problem of what should be done with the private capital that is excluded from one field of operation. How, moreover, would the funds be provided for the purchase of the railroads? Assuming, however, that these difficulties were surmounted and that the railroads had been purchased, the Plumb Plan then would provide for their operation by a board of fifteen directors, five representing the public, five the managers, and five the classified employees. That is, the public would have a voice in seeing that the service was efficient and rates not too high; the executives would have a voice in seeing that good methods were followed; and the subordinate employees a voice in securing fair treatment. The surplus earnings, it was proposed to divide between the government and the employees, providing that if the surplus grew beyond a certain



The black areas of this map show the main bituminous and lignite coal fields of the United States. The bituminous areas are for the most part in the eastern half of the country.

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[4] For an explanation of the plan see Glenn Plumb and G. F. Roylance, *Industrial Democracy* (Huebsch, 1923).

percentage of the operating revenues, the rates must be reduced for the benefit of the public. The deficits, if any, would be met by the government from other sources.

It is to be remembered, of course, that the existence of deficits in a public enterprise is not a proof of its failure. It may be socially advisable to run a government enterprise at a loss—for example, the postal system. It may be advisable to give the public the advantage of low rates and to make up the loss from other and easier sources of revenue. Many European localities manage their railways in this fashion.

The question of nationalization of coal mines has also been much agitated in the last few years, especially on the occasion of threatened strikes. A typical scheme for such action is contained in the Sankey Report on the English Coal Mining Industry. This provides for the state purchase of coal royalties and coal mines. Control would be exercised by councils of workers, consumers, and technical experts under the general supervision of a ministry of mines. Details of operation would be supervised by a National Mining Council, by District Mining Councils, and by Local Mining Councils.[5]

Economists differ concerning the extent to which the coal industry is now adaptable for centralized management; but certainly it presents many of the elements of such adaptability. The industry is fairly well concentrated in a few geographical areas; its methods are highly uniform and regular; it involves a vast expenditure of funds for equipment. It is at present under the control of a few large companies; and it is vital to industry as a whole. All these observations are more true of anthracite than of bituminous mining but in a more limited degree they apply to bituminous mining as well, though here there is less concentration and less control by a limited number of firms. Labor disputes which threaten the fuel supply of the country and public dissatisfaction with prices have been frequent and serious in the coal industry. On several occasions disastrous strikes have barely been averted and always the situation has been compromised with only a superficial solution. A recent dispute in Pennsylvania failed of adjustment and a winter-long strike ensued. But after it was over the public, with its usual contented optimism, immediately forgot the matter. This is a perennial difficulty which will arise again and again until a better solution has been discovered. The adjustments are made, in these disputes, with no approach to thorough statistical information about the facts of wages and profits involved. There is no bureau prepared to furnish such information on short notice and no agreement upon the principles which should decide the issue. The solutions are simply compromises between two forces which leave the public none the wiser as to the rights of the case. When other disputes arise, as seems inevitable, the country will be scarcely more able to cope with them.

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[5] For a more complete discussion see Carter Goodrich, *The Frontier of Control* (Harcourt, Brace, 1920). Also Arthur Gleason, *What the Workers Want* (Harcourt, Brace, 1920). The student is also referred to Walton H. Hamilton's *A Way of Order in Bituminous Coal*, for an American instance.

In the last few years the agitation for national ownership of railroads and mines has declined, and the question of power control has come to occupy the center of the stage. Vast mergers of gas and electric power, light, and heat companies are in process of formation; and it is undeniable that these private companies have in many cases obtained ownership or long-term rights to make use of water power once publicly owned, on terms far more advantageous to themselves than to the public. These devious methods of acquiring control, and their expensive propaganda against public ownership, have aroused much caustic and justifiable criticism.[6]

An exterior view of a Pennsylvania coal mine in the anthracite field. (Photo Hine.)

In such matters a genuinely disinterested and experimental economist will not rush to accept any wholesale solution. The most important thing, perhaps, is to urge the need of unbiased discussion and study from the viewpoint of the general welfare. Too many persons are incapable of approaching them in any but a violently partisan attitude, which depends often on the particular sources of their own income. We need more publicity on what is happening, and more objective data on the efficiency and costs of centralized private as compared with public operation.

We should realize that complete nationalization of an enormous industry is easier said than done. Great benefits may result from it eventually but the step should not be taken until the country is prepared to assume responsibility on a very large scale. The policy of government ownership and operation implies in the first place the running of a government mechanism as elaborate as that at present in existence in the private concerns now in control. It implies the securing and paying of able trained executives. It implies holding out to them inducements of some sort which will persuade them to exercise energy, public spirit, and inventiveness. It implies the devising of some scheme to avoid the persistent danger of all large-scale enterprises, that of falling into routine and red tape. Recent experience with the enforcement of prohibition has increased a certain fundamental distrust in the public mind also of the honesty and efficiency of minor public officials, especially if they are poorly paid and in a position to profit dishonestly from their position. This is not to say that the devising of such a mechanism as a national coal or railroad system is impossible or that it would have to be perfect at the start. It implies only that the magnitude and full implication of proposed plans should be understood in advance.

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[6] See *Power Control* by H. S. Raushenbush and H. W. Laidler, Republic Publishing Co., 1929; and *Electrical Utilities* by W. E. Mosher and others, Harpers, 1929.

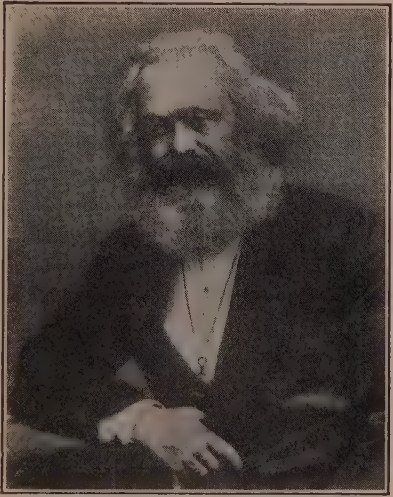
Some of the best illustrations of what can be done under public ownership are furnished by the numerous excursions of western municipalities into the power field. This is the San Francisquito power plant (No. 2) of the City of Los Angeles. In some instances water supplies are used on their way to the city for the generation of power. (Courtesy of F. L. Roehrig, Architect, and E. F. Scattergood, Chief Electrical Engineer.)

In the meantime, it is well to remember that there are many methods intermediate between complete government operation and unrestricted private operation. Without embarking on the former ambitious program, we can devote more systematic effort to seeing that the public's ultimate control over vital utilities and means of production is not lost; that valuable public properties are not given too cheaply, or for too lengthy terms, into private hands. Without preventing such private organization of scattered units and development of untouched resources as may be desirable, we can keep a watchful eye on profits, rates, and wages through permanent supervisory commissions.

CHAPTER 43

SOCIALISM

In discussing collectivism and government ownership we have, by implication, considered many of the fundamental issues involved in socialism. That word is defined in many different ways, and there are countless different brands of theory, all calling themselves socialism. But it is characteristic of practically all of them that they favor an extreme degree of collectivism in economic, social, and political affairs, and that they propose government ownership and operation of the major public utilities at least. What has been said, therefore, of the virtues and defects of any step toward collectivism applies with especial force to socialism.



Karl Marx, the "father" of scientific socialism.

Some of its advocates, however, assert that piecemeal introduction of collectivism in particular enterprises is bound to be unsatisfactory; that the values can be obtained and the defects avoided only by a thorough and comprehensive introduction of social ownership and control. It will therefore be worth while for us to examine some of the aspects of a thoroughly socialistic order and some of the most important ways in which the theory has been explained and defended.

The chief principles of socialism may perhaps be reduced to these:

1. The abolition of the rights of private ownership in the means of production (natural resources and capital) with retention of private property in articles of personal use; this implies state ownership of the means of production.

2. The administration of the means of production collectively by the state through a democratic political organization.

3. The abolition of the wage system as it is at present constituted; and the substitution for ours of another scheme for the apportionment of income.[1]

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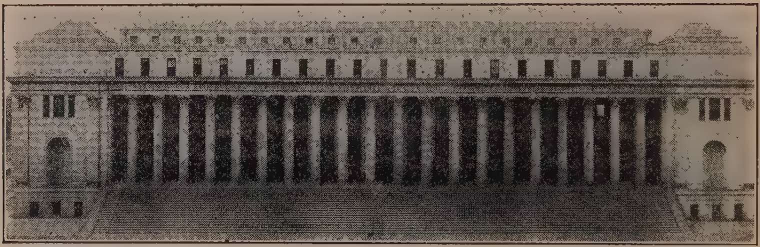
[1] "From each according to his ability, to each according to his need."

Let us consider briefly the implication of each of these provisions:

State ownership of the means of production would include, certainly, such things as the postal system, the railroads, mines, power systems, and communication facilities. It would, in all probability, be extended still further to include not only all public utilities but also the banking system and the principal manufacturing and distributing enterprises. A few extremists, the "communists," have advocated a common ownership of all property, including even furniture, clothing, food, and such articles of personal use, these things to be loaned and issued by the government to private users. But government ownership is not ordinarily so interpreted by socialists. As a rule, they would concede that even certain small handicrafts can be pursued more or less individually.

The bearings of political democracy on this system may be realized if we consider the difference between government ownership under an emperor and government ownership under an elected officialdom. Conceivably, a nation's entire industrial system could be managed from the top, like an army, by a hereditary despot. All the wealth might be his and the workers his slaves. This would be government ownership but not socialism. It is true that socialism generally is thought to imply a large amount of central control. In Russia, indeed, it has been interpreted as consistent with a military dictatorship, but even there the pretense at least of popular control has been preserved and the personal dictatorship described as a temporary measure. Ordinarily, socialists conceive the control of industry as resting in the hands of an elected government responsible to the whole people by universal suffrage. These officials might have any amount of power to secure discipline while they were in office but ultimately their rule would depend upon the consent of the workers.


Main Post Office building, New York City—part of a great government enterprise. (Photo Hine.)

Abolition of the wage system as well as the lure of private profits places upon the socialist the task of devising a new method for the apportionment of income. Here again a few extremists have advocated absolute equality; that money exchange should be abolished; that all should share alike in the social income, regardless of the amount or quality of the work they do.

This, in fact, is the popularly understood meaning of socialism, but it is not an essential, or even a usual teaching of the leaders of the socialists. One may conceive their usual scheme best by imagining the extension of our present Civil Service to cover all industries. There would be no private enterprisers even in retail selling or, perhaps, in the arts and sciences. Every individual would be a servant of the state. All profits would go to the state as a whole and be apportioned among the citizens according to some scheme which seemed likely to result in just distribution.

The history of socialism as a theory and a movement may be divided into two main periods: the idealistic or Utopian period, and the Marxian period. The dividing line between these two types of socialism is the Communist Manifesto of 1848. Leaders in both these types of socialism believed in collective ownership of the means of production but they differed widely in their conception of the steps necessary to bring about a socialistic order.

The earlier socialists, among whom we may mention Robert Owen, a philanthropic factory owner of the early nineteenth century, were in general mild and benevolent men of altruistic and generally religious motives. He and other Utopians—Saint Simon, Fourier, Cabot, or to go further back, Sir Thomas More—believed in the rule of justice and Christian charity.[2] They believed that socialism was simply another word for the brotherhood of man, and that it would be attained by peaceful means. Philanthropic men of wealth, such as Owen himself, they thought, could take the lead in organizing small communities and share their wealth with the workers, or at least grant them a large amount of control over its management. Industrial society would come in time to consist of members of such small friendly communities living together with common interests, without selfishness, engaged in common enterprises. This, it will be remembered, was during the earlier years of the industrial revolution when the full consequences of the introduction of machinery were as yet not realized: when, for instance, the great scale on which modern operations were to be carried on had not yet been reached, and when the great cities of our time had not been envisaged.

Toward the middle of the century it became increasingly apparent that the introduction of a rule of justice and coöperative industry was not so easy a matter as the Utopians had supposed. Philanthropic factory owners were few, and even had there been more of them, they would have found it hard to bring about a new social order simply by giving away their wealth or organizing small idyllic communities. Vast forces were at work disrupting the old domestic system of manufacture, remaking industry on a new pattern, and at the same time altering the whole social system. Manufacturing had to be done in large and expensive factories, employing hundreds or thousands of workers. There was great competition for work, and a large class of unemployed. Old occupations were being destroyed, and the independent craftsmen being wiped out. In addition to this a new class of urban workers, almost propertyless, was multiplying in numbers and was suffering more misery with each mechanical invention. The owners and operators of the new means of production were growing rich over night, and coming to constitute the dominating power in European nations. The source of their wealth, the new production goods—machinery, materials, ships, railways, factories, and the like, set them apart from the older aristocracy whose wealth was the land. In a few decades, this newly powerful middle class succeeded in wresting the reins of governmental influence from the landed aristocracy. Many members of the older class entered industry and identified their interests with the middle class. All this was evidently going on in England, France, and Germany, and no one knew where it might lead.

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[2] Cf. Lewis Mumford, *The Story of Utopias.* Also J. O. Hertzler, *History of Utopian Thought.*

One of the largest of government industries is illustrated here: at top, an exterior view of the government printing plant; at bottom, a storage floor. (Courtesy U. S. Dept. of Agr.)

The doctrines of Karl Marx were concerned with an interpretation of these economic and social phenomena. They offered an explanation of the underlying causes of events, a prophecy as to their future outcome and certain conclusions as to a program for the workers who were suffering from the new conditions. Primarily, the writings of Marx embodied in the famous "Communist Manifesto" and in his book, *Capital*,[3] were not in the nature of propaganda or exhortation, but a description of what Marx believed to be the inevitable course of history. He was clear, for one thing, that the influence of economic factors in the course of events had been underestimated in the past. Histories had explained events in political terms, by the acts and edicts of kings and queens, of parliaments and armies; conspicuous personalities had been thought to shape the destinies of nations. In contrast, Marx taught that these conspicuous aspects of history were but its outward manifestations; the underlying causes were economic. The primary force shaping events was the struggle between workers and capitalists—the "class struggle." It was this force which had brought about wars, though they might seem to be religious or patriotic or idealistic to the superficial observer; it was this force which had made and unmade leaders and allowed them to be, for a moment, the figureheads and spokesmen of economic events. History was to be explained, in short, not in terms of personalities and political or military events, but in terms of the movement of silent masses blindly struggling to attain a livelihood. This theory is known as the materialistic interpretation of history. Historians today are agreed that there is considerable truth in it; at least the importance of economic factors had certainly been unduly minimized before Marx. But they are far from agreed that the moving forces of history can be reduced entirely to material ones. Human psychology is more complicated and unaccountable than that would imply. People are sometimes moved by religious enthusiasms, by patriotic ideals or by mere unreasoned impulses in directions which run counter to their obvious economic interests.

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[3] Karl Marx, *Capital* (Charles H. Kerr & Co., Chicago, 1906). See also Marx and Engels, *The Communist Manifesto*, published by the same. Cf. also E. R. A. Seligman, *The Economic Interpretation of History* (Columbia University Press), which S. N. Patten called "the bible of American Socialism."

The second proposition in the Marxian doctrine was the law of the concentration of capital. The rich are becoming richer and the poor poorer. Capitalistic undertakings tend to become larger and larger. Small competitive enterprises tend to disappear and to be replaced by great trusts. This process, said Marx, must inevitably go on until all the wealth of a nation is concentrated in the hands of a few.

Concerning this, it is difficult to say, as yet, whether Marx's prophecy will be justified. Wealth apparently has not become wholly concentrated in the hands of a few individuals. Our ways of measuring such a phenomenon are handicapped by a lack of relevant data. But so far as we can tell the relative proportions have not notably changed. There are those who insist that the drift has been in the opposite direction. Mr. T. N. Carver is the outstanding optimist of this sort. He cites a considerable growth in individual savings accounts and an apparently widening distribution of stock ownership as evidences.[4]

These evidences, it must be admitted, however, have less force than some others which can be cited as showing a concentrative tendency, slight, but still clear. The Federal Trade Commission in an attempt to arrive at some conclusion as to the apportionment of wealth[5] adopted the method of examining the records of all estates probated in twenty-four typical counties of thirteen typical states, from 1912 to 1923. The results are shown in the accompanying table on page 690.

Certainly these results, however they may be discounted, are sufficiently disturbing. Less than one per cent of the decedents owned nearly sixty per cent of the wealth involved. Eighty per cent of the decedents owned less than six per cent of the wealth. The average was $3,827, but ninety-

[4] *The Present Economic Revolution in the United States.*

[5] We speak here of *wealth* not *income* which is discussed elsewhere.

DISTRIBUTION OF WEALTH IN UNITED STATES AS INDICATED BY ESTATES OF 43,512 DECEDENTS IN SELECTED COUNTIES (1912–1923)[6]

Size Group	Number of Estates	Value of Estates	Average Value	Per Cent of Total Estates		Per Cent of Total Probated Estates	
				Number	Value	Number	Value
Not Probated *.......	141,446†	$36,493,068	$258*	76.5	5.2	.....	.....
Under $500...........	6,099	1,574,598	258	3.3	0.2	14.0	0.2
$500 to 1,000..........	4,824	3,388,144	702	2.6	.5	11.1	.5
$1,000 to 2,500........	8,766	14,196,279	1,619	4.7	2.0	20.2	2.1
$2,500 to 5,000........	7,572	26,933,713	3,557	4.1	3.8	17.4	4.0
$5,000 to 10,000.......	6,466	45,160,804	7,006	3.5	6.4	14.8	6.7
$10,000 to 25,000......	5,518	85,233,637	15,446	3.0	12.0	12.7	12.7
$25,000 to 50,000......	2,231	77,930,090	34,930	1.2	11.0	5.1	11.6
$50,000 to 100,000.....	1,105	76,040,228	68,815	.6	10.7	2.5	11.3
$100,000 to 250,000....	651	97,599,624	149,922	.4	13.8	1.5	14.6
$250,000 to 500,000....	179	60,325,705	337,015	.1	8.5	.4	9.0
$500,000 to 1,000,000...	76	52,026,811	684,563	....‡	7.4	.2	7.8
$1,000,000 and over....	44	130,913,033	2,975,296	....‡	18.5	.1	19.5
Total probated......	43,512	671,322,676	15,428			100.0	100.0
Total all estates.....	184,958	707,815,744	3,827	100.0	100.0		

* Decedents who left no estate for probate were presumed to have had as much property as the average of the lowest group namely $258 each.
† Estimated from census mortality tables.
‡ Less than one-tenth of 1 per cent.

one per cent of the estates fell below this figure. A chart may be used to make this clearer.

No one, on the basis of the figures just cited, is justified in the optimistic conclusion that the present tendency is toward greater diffusion of wealth. On the contrary, the results shown here seem to indicate a concentration somewhat in excess of that discovered by Mr. King in 1900.[7] But the tendency in this direction is not, apparently, a rapid one. We are, as yet, not even justified in concluding that it is permanent.[8]

We must in any case be cautious in concluding that capitalism is becoming more democratic. Even if it were to be admitted that *ownership* of capital has been to some extent diffused, a conclusion not justified by any present facts, the *control* of capital has certainly been concentrating in the hands of a few very large stockholders, directors, and executive officers. The merger movement which we have described as affecting most fields of industrial activity has as one of its features the placing of actual management within the power of a group of men which is shrinking rather than growing in numbers. The very fact that ownership is meanwhile scattered among small stockholders who cannot act together, either from lack of interest or because their shares carry no voting power, facilitates manipulation by the insiders. Employees' participation in the ownership of a firm rarely carries with it an effective participation in management, and may operate to lull the worker into acquiescence in unfavorable wage and hour conditions through the delusion that his interests are identical with those of his employer. As to the growing army of small shareholders among the general public, they are increasingly ignorant concerning the management of their property, and even the allocation of their funds is being taken over from them by investment trusts.

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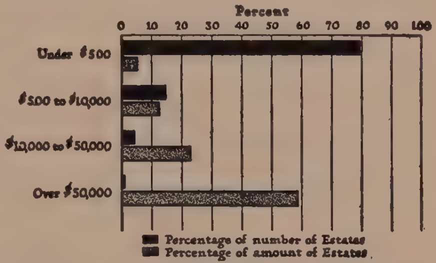
[6] *Wealth and Income* Senate Document 126, 1926, p. 58.

[7] W. I. King, *The Wealth and Income of the People of the United States*, 1915, p. 80.

[8] But consult the discussion of this material in H. G. Hayes' *Our Economic System*, Vol. II, pp. 473 ff.



This chart is an adaptation of the data presented in the preceding table. (Adopted from Wealth and Income Senate 126, 1926.)

S-S-ST—THERE'S OL' LIVERFOOT GIVIN' US TH' EXECUTIVE STARE HE'S GOT TWO SHARES O'STOCK IN TH' COMPANY, AN' WHENEVER HE SEES ANYBODY PAUSE FER BREATH HE THINKS HE'S LOSIN' DIVIDENDS.
YES, HE BOUGHT IT WHEN IT WAS FIVE DOLLARS A SHARE, FIVE YEARS AGO. IT'S WORTH 4.99 NOW, AN' HE THINKS WE'RE DOIN' IT.
JUST GO RIGHT ON. I'M BIGGER TH'N HIM—I GOT THREE SHARES IN THIS COMP'NY. "GOIL OF MY-Y-Y DR-HEEE
NO—. START AT TH' FIRST AGIN. R-R-R H-H- HOW'S ZAT GO NOW AGIN?
THE STUCK HOLDER
J.R. WILLIAMS

A cartoonist's sardonic view of employee-shareholding schemes. (New York Telegram.)

It was in anticipation of an expected concentration of capital that Marx predicted a division of society into two classes, the capitalist and the wage-earning, the *bourgeoisie* and the *proletariat.* These would be bitterly opposed to each other, for their interests were largely antagonistic. To be sure, there was a common ground—both might be interested in the success of enterprise; but fundamentally the employer stood to profit by paying as little as possible for as much work as he could get out of his workers; the employee to profit by selling his services as dearly and doing as little work as he could. Altruism and benign Christian sentiment were irrelevant and helpless in the face of this irresistible force, and a philanthropist who gave away his wealth, or a worker who sought to coöperate with his employer, was merely delaying the march of events. Likewise all legislation and charity directed toward alleviating the condition of the poor or correcting specific troubles was useless. In fact, it was rather harmful to the worker in the long run, since it made him contented with a state of affairs which was fundamentally hopeless and unjust, divided his forces, and delayed the ultimate reorganization of society. For this reason, Marx rather deplored the growth of trade unionism, especially of the craft type. These unions are opportunistic; they work for specific conditions in the way of increased wages and shorter hours, not towards the social revolution. They tend to divide the workers into exclusive and competing groups. In so far as they succeed, they are prolonging the basic evil.

Marx's advice to the worker, therefore, was to be farsighted, to make immediate sacrifices for the ultimate good of all. First and foremost, let the workers unify, visualize their common enemy, and move against him as a class. Let them educate themselves and be prepared to take over the control of industry when their day came. Let them not be deluded by false promises of concessions from the capitalist, by his charities, parks, free music, and education. The worker had a world to gain and "nothing to lose but his chains." Marx himself believed that the class struggle would involve little actual violence. Unless it were prematurely attempted, there would be no opposition to the workers. If left to themselves, the capitalists would reduce their numbers to a small handful of enormously rich men, all others being drawn into the propertyless masses. There would have been built up an effective and highly integrated industrial and financial machine. (On this point, at least as regards the integration of management, Marx's prediction is being realized.) What remained for the working class was simply, when this time came, to recognize the fact and take over control, not destroying the machine but utilizing it, under public management, for the social interest, rather than private good.[9]

Other labor leaders of Marx's time and later were impatient with this policy of waiting for the natural developments of the course of history, and, in the desire to hurry the new day, preached violence and terrorism. Especially in Russia there arose a group of terrorists who conducted for years guerrilla warfare against their rulers. Among these were not only followers of Marx but also anarchists. Philosophically, the anarchists were at the opposite pole from the socialists, believing in extreme *individualism* rather than *socialism*. But, for practical purposes, they worked together for a time against the old régime. The Russian Revolution of 1917 obviously was premature from Marx's viewpoint since it occurred before the country had automatically reached the point of concentrated industrialism.

In all countries there have been labor leaders and social reformers who accepted in part Marx's teaching but differed on important points. One may agree that the ultimate social order should be socialistic, yet disagree on Marx's predictions and on the policy of the class war. Socialists who favor gradual legislation to bring about the desired end are known as "reformists" or moderate socialists as contrasted with the orthodox or Marxian.[10] Contrary to the advice of Marx, they will consent to participate in capitalist governments, to accept seats in the legislature, to assist toward unionism, to work for particular relief measures, and even to accept seats in the cabinet of a bourgeois government. In England, a group known as the Fabians, under the leadership of such men as Sidney Webb, Bernard Shaw, and H. G. Wells, were, several decades ago, advising slow constitutional methods for bringing about reform.[11] In both Germany and America socialist parties have arisen that put up their candidates in a regular way, seek to elect legislators, and influence legislation in favor of labor. They have usually been more or less divided into a moderate or right wing and a radical or left wing upon the question of the desirability of forceful prosecution of the class war. Between 1918 and 1920 controversy raged in the American Socialist Party between the right and left wings, but by 1920 the greater part of the latter had resigned or been expelled. The "Workers' Party" is now the political representative of the left wing, communist group, which favors a sudden seizure of power by the proletariat.

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[9] The student is here referred to Mr. H. J. Laski's historical interpretation of socialistic theory, *Communism*, 1927.

In America, it has been the trade-union movement which abstained from politics, preferring to deal with the employer and to attempt to influence both old parties in their favor. In England a labor party has been formed by amalgamation of several different groups who agreed to put aside questions of detail in a common endeavor for conditions more satisfactory to labor. They include the Fabians, most of the trade-unions, and many liberal thinkers of various political views. Excluded, and unwilling to coöperate in parliamentary methods, are the Communists who insist upon an irreconcilable class war. The British Labor Party in its tenures of power under the leadership of Mr. Ramsay MacDonald has shown itself willing, under compulsion, to compromise and coöperate with more conservative groups; to advocate only moderate reform measures. In Germany during the war, the majority of the socialist party cast in their lot with the Imperial government and the military régime. Only a handful of independents led by Liebknecht held out. Since the war, the moderate or conservative socialists have been powerful, although threatened by assaults from the extreme left, and have shown their willingness to compromise with capitalistic interests.

The essential outlines of the commonwealth aimed at by American Socialism, according to one of its spokesmen [12] are as follows: (1) Social ownership by political and industrial bodies of many types; (2) The survival of private ownership in certain fields; (3) The disappearance for the most part of interest on private capital; (4) Equality of opportunity; (5) Inequality of incomes; (6) Guarantee of adult employment with social provision for the incapacitated; (7) Competition, limited at the bottom by the living wage and elsewhere by the whole contribution of the individual to the social product. "The tactics of the American Socialist Party," says the same writer (p. 169) "are in their fundamentals what the tactics of Marxian Socialism have always been—to agitate, to educate, and to organize the working class into a political party whose goal is a commonwealth of production for use rather than for profit. In many details, however, its methods bear the stamp of post-war America. Socialism is pointing out to a nation proud of its efficiency the antiquated inefficiency of capitalism. It is presenting in its newer literature the detailed plans of experts for the socialization of such industries as are now ripe for the change. It is using less and less the phraseology of the last century European workers who recognized themselves as permanently set apart from the bourgeoisie, and is expressing itself more and more in the time-honored language of American idealism, which views with alarm our growing differentiation into social classes and demands a return to the democracy of pioneer times."

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[10] Cf. H. W. Laidler, *Socialism in Thought and Action*.

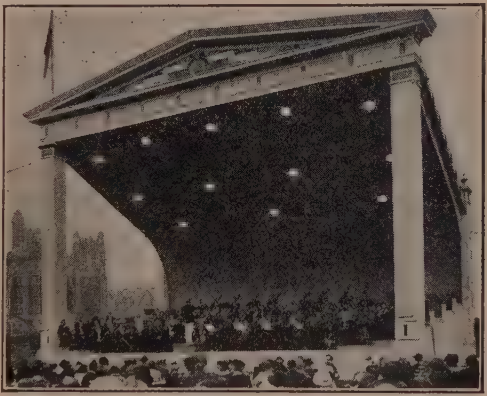
[11] Cf. various pamphlets of the Fabian Society, especially those called *Fabian Essays*.

[12] Jessie Wallace Hughan, *What is Socialism?*, p. 84.

Only a very small minority among labor groups holds, today, the class-war doctrine in its extreme form. Socialism to them is in the nature of an ultimate ideal at most. There are among labor leaders, especially in the trade-union movement, those who oppose socialism on principle, believing they stand to profit more from retaining the capitalistic system and insisting upon a substantial share of its earnings. As an ideal, however, socialism is undeniably influential today, not only among laborers themselves but among many members of the capitalist class who would perhaps be unwilling to be described as socialists. It has contributed to public opinion everywhere a certain influence toward the gradual extension of social control over industry and the results of industrial hardship.

To repeat what has been said in other connections, we may say that the general advantages to be looked for from pursuit of the socialist ideal are the advantages of coördination and coöperative management in industry: that is, the elimination of duplication, of friction among industrial agencies, and undue profit-making by private enterprisers. Over against this must always be set the extreme difficulty of building up a governmental machine sufficiently vast and well regulated to perform the functions now performed by a multitude of private concerns. We must realize that inefficiency and selfishness will not be banished from industry by the simple act of turning private enterprisers into government officials; no social revolution can transform human nature overnight. The introduction of socialism would necessitate far-reaching alterations and extensions of our present government. It would not be sufficient merely to hand over to the government as at present constituted such enormous new tasks. The government would have to be made capable of assuming them. Means would have to be devised of inducing capable executives to devote their enthusiasm to the tasks of public management. Inefficiencies which do relatively little harm in the operation of our present governmental functioning, with its small range of tasks, would become serious in a government which attempted to manage completely the nation's industrial life. Thus it is that socialism cannot be considered from the point of view of either economics or politics alone. When government is identified with industry, as it would necessarily be under socialism, there is necessitated a reorganization of both.

In reducing all apportionment of income to government wage payments on the Civil Service model, socialism raises several serious problems. It must, in the first place, prepare and defend detailed criteria of relative merit for determining what percentage of the social income each type of worker shall receive; it must also consider not only merit but the important question of how to induce good work on the part of its employees. Without the lure of profits and having become a part of the Civil Service machine where advancement may be slow with emphasis upon tenure of service rather than brilliance of accomplishment, the individual worker, and especially the better one, is apt to hold back.


The New York Symphony Orchestra playing at a summer concert—one of the activities most precious to civilization but most likely to be overlooked in the creation of social schemes.

Force is, in the long run, an inadequate way of handling this situation. As we have seen in an earlier section, it is one of the leading problems of economic reform to stimulate the voluntary and contented efforts of the worker. The present chaotic way of apportioning income is obviously not in ideal accordance with any moral standard, but at least it gets done in some sort of way and with a considerable amount of satisfaction. Socialism in endeavoring to improve this series of improvised ways of apportionment takes upon itself a serious and immensely intricate task. No doubt society will be more and more compelled as time goes on to consider this task and to attempt to reward merits and stimulate motives in industry by some rational plan, but it is a task which cannot be accomplished by theorizing or in a single revolution. It requires the voluntary adherence of united opinion and an experimental working out over a long period of time.

Among other questions of a noneconomic sort which socialism involves is the conduct of worth-while enterprises which are not productive of material wealth, the luxuries so to speak, of our civilization. At present, art, amusement, the cultivation of enjoyable ways of utilizing leisure, the creation of all the products of intellectual and æsthetic culture—all these are left largely to capitalistic patronage in one form or another. Many universities, symphony orchestras, new theaters, art schools, periodicals which appeal to a reflective minority are supported by private endowments. Individual artists can support themselves only by depending upon the sale of their productions to a limited public which possesses a personal surplus of income and is willing to part with it for goods which are in no sense necessities and yet which represent some of the highest achievements of our time. Under socialism all these enterprises might be conducted by governmental action and appropriation, but many reformers who approve of socialism on economic grounds are seriously concerned lest it threaten the quality of our culture. If harm were not to result in a socialistic state some means would have to be provided whereby artists and scientists—social scientists among others—pioneers of all sorts, in fact, who might be unacceptable to established officials, would be able to pursue with some freedom the course of their creative work. Government regulation of art and science or very close control of the funds necessary for their support have in the past proved somewhat dangerous. The will and taste of the multitude, or of fanatical and intolerant elements in the multitude, are apt to prevail. Creation under these conditions is stifled. In trying to abolish the obvious evils of capitalistic control of intellectual activities, and substitute the forms of control that would follow from socialism, we ought to consider whether we are not likely to incur a new set of evils worse than those we now suffer under. Safeguards would have to be built up by the people against their own prejudices and stupidities. Protection would have to be devised against the repression of spontaneous individual development by a crystallized and unprogressive social mechanism.

CHAPTER 44

SYNDICALISM, GUILD SOCIALISM, AND THE MODIFICATION OF SCHEMES IN EXPERIENCE

1. *Syndicalism and Guild Socialism*

Socialism as presented in the writings of Karl Marx fails in many ways to present an adequate picture of industry as it has developed since his time. Especially, it fails to show the division of workers and of production itself, into small units, such as the factory and the unions among craft or industrial workers. Marxian socialism tends to treat the working class as a whole without differentiating workers into different types and without considering the organization of production into a delicately interrelated and adjusted series of affiliated units of production. In fact, it has been charged that Marxian socialism regards industry from the standpoint of the consumer rather than of the producer; that it is concerned chiefly with correcting the distribution of wealth, and that it fails to provide an effective plan for the organization of production under modern conditions.

It simply hands over the latter question as a whole to the national and municipal governments, placing upon them the burden of working out a vast and detailed organization capable of taking over factory management. This not only requires the building from the ground up of an entirely new structure but it runs the risk of excessive centralization, the intrusting of so much oversight to a central body that effective supervision of details over a large area could not be exercised. It also runs the risk of creating an autocratic central power without providing for the fair adjustment of conflicting interests among the groups of industry. There is certainly nothing voluntary in the affiliation of each group with the bureaucracy. Yet, unless force is to be depended upon, no provision is made for securing group coöperation.

These difficulties syndicalism and guild socialism claim to avoid. Instead of beginning with a theory and calling for the construction of an elaborate mechanism to carry it out, they begin with existing social mechanisms and profess not to be much interested in general theories as the Marxians are. Production has already spontaneously organized itself into factories and their affiliations; workers have already organized themselves into unions. Let these units, then, the factory and the union, be taken as the units of industrial management. Let their interrelations be more fully perfected and let them then take over the control of industry. Thus, the interests of the producer as well as of the consumer will be protected. Industry will be run by productive units, organized on a factory basis, rather than by consumers organized on a territorial or political basis. Instead of dealing with the working class as an undifferentiated whole, these schemes propose to deal with it as a collection of groups, admittedly nonidentical in interest, but capable of reconciling their quarrels through collective deliberation. Since authority finally rests in the coöperating local groups there can be none of the overcentralization or authoritarian compulsion that seems inevitable under orthodox socialism.

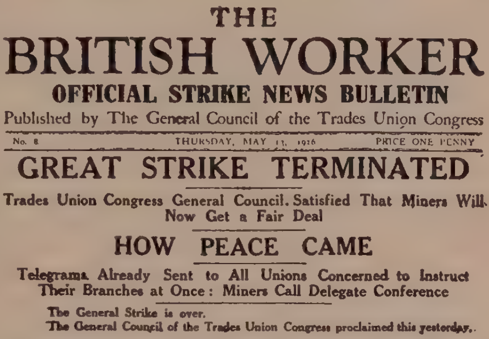
The syndicalists would run industry through the autonomy of local or factory groups; thus all the workers in a steel mill would be organized to manage their own affairs. (Photo Hine.)

Syndicalism is a somewhat older movement than guild socialism. It dates from the seventies and eighties; guild socialism is a development of the few years immediately preceding the Great War. Since guild socialism is in a way a compromise between syndicalism and state socialism, it will be well to consider syndicalism first, as to its peculiar characteristics and then see how these characteristics have been merged in the guild-socialist scheme.

The word "Syndicalism" is derived from the French word for trade-union, and the movement itself is distinctly French in origin.[1] It grew out of internal disputes in the French Socialist Party. A considerable group of labor leaders differed with the orthodox Marxians and insisted upon recognition of the trade-union as a factor in the labor movement. They opposed, also, the growing tendency among moderate socialists to adopt mild political action, that is to vote, elect government officials, and pass social legislation. The syndicalists, as they came to be called, advocated direct industrial action as a means of carrying on a bitter class struggle. Their characteristic weapons were the ones that were easiest to adopt: the boycott, sabotage, and the strike. Whenever possible the capitalist employer was injured by means which would allow the individual worker to continue on his job earning wages; slow or inferior work was done; company rules were followed out with absurd exactness so as to hamper practical efficiency, and machinery itself was damaged surreptitiously or openly. As these weapons began to come into use, a group of theorists began to dignify these practical schemes into a theory of syndicalism, which has led to the belief that syndicalist tactics were more prevalent and more successful than in reality they ever were.

[1] Cf. Louis Levine, *Syndicalism in France* (Columbia University Press).

The technique of organized striking was to be developed as rapidly as possible, according to the theorists, by encouraging a class and group consciousness among the workers and by practical experience in carrying on sympathetic strikes. The hoped-for consummation would be a "general strike" in which all workmen would, at one time, in some crucial moment, lay down their tools and refuse to produce until the ownership and control of production were given over to them. In the meantime, union organization was to be perfected along the industrial rather than the craft line. This meant affiliation of the workers in the natural groups of modern industry rather than the obsolete ones of craft distinction. By this means a completely unified and organized group was to confront the owners of industry upon their own field, being all interested in the product made rather than the type of effort expended.



THE
BRITISH WORKER
OFFICIAL STRIKE NEWS BULLETIN
Published by The General Council of the Trades Union Congress
No. 8 THURSDAY, MAY 13, 1926 PRICE ONE PENNY
GREAT STRIKE TERMINATED
Trades Union Congress General Council. Satisfied That Miners Will Now Get a Fair Deal
HOW PEACE CAME
Telegrams Already Sent to All Unions Concerned to Instruct Their Branches at Once: Miners Call Delegate Conference

The General Strike is over.
The General Council of the Trades Union Congress proclaimed this yesterday.

The general strike in the United Kingdom was something less than a prelude to revolution.

By the general strike it was hoped that labor could inaugurate the new industrial order. What this order was to be was not very clearly outlined in any concrete way, but the chief fear of the syndicalist was that, after the capitalist was out of the way, a bureaucratic state government would follow. Therefore his planning for his future was mainly negative: the securing of freedom and autonomy for the unions.[2] In this desire for looseness of social organization the syndicalists were at one with the anarchists, and the two groups of radicals were at times able to work together with some harmony, especially since they both agreed on terrorist tactics also. The method of carrying on production is clear enough within the individual factory: ownership and control were to be entirely in the hands of the local union of workers. This is, indeed, the original meaning of "syndicat." But as to the relations between the factories and the unions which controlled them, the syndicalists had little to say, assuming in an idealistic fashion that no serious disputes would arise among brother workers. By far the greater part of the thought and energy of the movement has been devoted to the destructive side, to the demolishing of capitalism.[3]

The general strike, of course, never materialized. Workers were not sufficiently organized or in agreement. The effect of the Great War was to disintegrate labor still further by enforcing patriotism. In Italy, just after the war and under the inspiration of the Russian Revolution, several vigorous attempts were made to force through a syndicalist uprising. Several large factories were seized by groups of workers, the government being at the time powerless or indisposed to prevent them. The attempt to operate these factories, however, was in every case a total failure. As might have been expected, internal discipline was poor and the rebel factories unable to buy and sell, or to fit in at all with the network of modern industry. Soon a counter movement in the shape of the Fascisti suppressed the rebels completely.

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[2] For a typical example of syndicalist pseudoscientific propaganda see *Industrial Socialism*, by W. D. Haywood and Frank Bohn (Kerr & Co., Chicago).

[3] For a full discussion of the movement see Savage, *Industrial Unionism in the United States* (Ronald, 1922).

In America the movement has met with similar failure. Nearest to the French syndicalists in principle are the Industrial Workers of the World (the "I.W.W."). This organization attained, just before the war, and during its first few months, a considerable membership, especially in the northwestern states.[4] The type of men it attracted to membership was mostly the casual floating population of the farms, lumber camps, shipyards, textile and steel mills, railroad construction, and modern transportation industries. Such men were frequently out of work either through personal irresponsibility or through the irregular character of their industries, and drifted about from place to place. Such a group of men was incapable of much solidarity for a sustained coöperative effort. Under the leadership of W. D. Haywood, certain of its representatives drew up a constitution, agreeing in spirit with the principles of French syndicalism. "The Working Class," said its preamble, "and the Employing Class have nothing in common. Between these two classes, a struggle must go on until the workers of the world organize as a class, take possession of the earth and the machinery of production and abolish the wage system." Craft unionism as represented by the American Federation of Labor was to be opposed and "one big union" of all workers substituted. Skilled and unskilled laborers were to fight side by side and forget their differences. Direct industrial action, violent if necessary, was to be carried on. Ultimately, not only industry but the political government as well was to be taken over by the workers so organized.

Financially and numerically weak, undisciplined and harshly repressed by patriotic and conservative groups, the I.W.W. today are a negligible factor in the nation's industry. Their policy has been confused by the mixture of remote, revolutionary ideas, with local protests against real specific grievances. They lack the organization into stable subordinate groups which a successful syndicalist movement necessitated. The vague discontent, in part justified and in part fanatical, failed to communicate itself to the highly paid and contented majority of workmen during and after the war.[5] As an organization, therefore, their influence is practically dead;

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[4] Cf. P. F. Brissenden, *History of the I. W. W.* (Columbia University Press).

[5] Cf. R. G. Tugwell, "The Casual of the Woods," *Survey*, xliv, 641–42 (July, 1920).

but the spirit of industrial unionism and revolution still exists and manifests itself periodically, especially in the attempts of radical members to gain control of the American Federation of Labor by "boring from within" as well as by direct opposition to the craft union.

Longshoremen—of the type of workers attracted by the philosophy of the I. W. W. (Photo Hine.)

The idea of utilizing the industrial union as an instrument for the control of industry has appealed to many economic theorists who are totally out of sympathy with the destructive side of syndicalism. Convinced, like the syndicalists, of the weaknesses of state socialism, they have sought to work out a scheme for utilizing the stronger elements of both. This in essence is the idea of guild socialism.[6] It proposes the working out of a fully perfected network of industrial unions and their parts from the smallest works committee up to a supreme national board. The guild socialist parts company with the syndicalist in proposing a strong central body to supervise and mediate between the various unions. He proposes also that the particular unions shall not own the means of production outright but only operate them as agents of the state. The state government shall retain the ultimate possession of them, but not attempt to direct the details of management. The scheme calls, of course, for abolition of private capitalism and of the present wage system, but it does not imply the class war or the use of direct rather than political action as a means to these ends.

Sleeping quarters in a construction camp. This place is supposed to house fifty sleepers. Such conditions as these lead with deadly precision of consequence to the phenomena of modern unrest. (Photo Hine.)

Each guild or industrial union would exercise complete management of all the activities connected with its particular industry, buying, manufacturing,

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Also C. H. Parker, "The I.W.W." and "Toward Understanding Labor Unrest," in *The Casual Laborer* (Harcourt, Brace, 1920).

[6] Cf. G. D. H. Cole, *Guild Socialism* (Stokes, 1920), and Niles Carpenter, *Guild Socialism* (Appleton, 1922).

and selling. The distribution of its income among its members would be a matter for decision by the guild itself. One guild might choose the plan of equal rewards regardless of the type of work; another might attempt the apportioning of rewards on a basis of relative skill. Each guild would contribute to the national state a certain tax or rent for the maintenance of common national enterprises.

Supreme authority in industrial matters, according to the proposal, would be exercised by a guild congress, consisting of representatives of all national guilds. Each of these national guilds in turn would consist of all the subdivisions in a particular industry within the nation. It would be the function of the guild congress to adjust questions arising in regard to the relationships of various industries.

In addition to this congress a parliament would exist, similar to the present one; that is it would represent the community on territorial lines. So selected without reference to guilds or occupations, its members would represent the public as consumers rather than as producers. To them would be delegated the supreme authority in political as distinct from economic matters. Should conflicts arise among the established bodies, a joint committee selected from both houses would deal with them. Those matters concerning the people both as producers and as consumers, such as the adjustment of prices, could be settled by such a group, representing both aspects of economic life.

Guild socialism still remains in the form of an academic theory rather than of a practical and influential movement. The obstacles to its progress are those substantially that we have seen operating against both state socialism and syndicalism and in favor of the present capitalistic régime. There is, first and foremost, the contentment of a large proportion of the workers with the present system, because of conservative temperaments, loyalty to capitalism as associated with patriotism, prosperity under capitalistic masters, or because of a mixture of all of these. So far, the movement toward industrial organization of workers has not seriously threatened the older, opportunistic craft lines in any western country. So far, the structure of unionism has not developed sufficient stability or power to give promise of being able to supplant capitalistic managers efficiently in the near future. The energy of unionism is still largely devoted not to transforming the old régime but to exacting concessions from its present rulers. The mutual relations of different industrial groups of workers have not given evidence of great ability to coöperate. For example, the great projected Triple Alliance in England between the coal, railroad, and transport workers quickly collapsed, in a crucial strike, through the refusal of one of its branches to support its allies. It is easy to foresee in a guild congress, representing various industries, some powerful and some weak, serious clashes and exploitation of weaker groups. Adjustment of prices and apportionment of shares in the total national income would be a source of infinite friction.

Once again, however, we must distinguish between the immediate practicability of a plan and its value as an ultimate ideal. The defender of guild socialism would reply to the objections just made that difficulties at least as grave as these confronted the United States Congress at its inception; that with time, patience, and a small amount of social coöperativeness, they would not be at all insuperable. One should also be able, in discussing such a project, to single out specific elements in it without accepting or rejecting it as a whole. If we desire, for example, a genuinely representative government, there is much to be said in favor of a house of congress which shall represent the people in their producing capacity. At present, neither Senate nor House of Representatives, Lords, nor Commons, gives such representation. There must and inevitably will be some future mechanism on a national scale to adjust the relations between industrial groups, including proposed organizations of both workers and employers. For such a mechanism, the guild congress above mentioned is a suggestive idea. Guild socialism presents in general a most profitable form under which to visualize and discuss the future extension of both trade unionism and government ownership.

2. *Socialism in Britain and America*

The real situation with respect to adherence to such schemes as have been discussed, is set forth in a recent article by J. A. Hobson. His reference is partly to British conditions but its relevancy is increased by this, for the situation of Britain is more advanced than our own but at the same time very much what we may expect to develop here:

> Nobody really loves the state or its government. No business man, few workers, or other members of the community, at any rate in Britain or America, want any more governmental interference than seems indispensable. As a result of the war (itself the most concentrated and extreme state socialism) governments as business instruments are everywhere discredited—probably beyond the merits of the case. The popular nineteenth-century propaganda for wholesale state ownership and operation of "all the means of production, distribution, and exchange," has no substantial appeal to the labor or any other elements in Britain, though it still figures sometimes on platforms and programs as a pious formula. The trade unionists who form the vast majority of the British Labor Party are neither in heart nor head state socialists, in any sense that corresponds to the formula. Their economics is one of local trade autonomy, qualified by certain limited measures of state aid and regulation. With good-humored indifference they allow a small energetic minority of I. L. P. or other "Socialists" to represent them at congresses and to commit them formally to large propositions about which they understand and care nothing. But the I. L. P. and other little "revolutionary" groups do not really stand for the orthodox policy of state socialism. The day when citizens and workers seemed willing to entrust the conduct of state or municipal undertakings to the unfettered will of elected or appointed officials has gone by. It is partly the result of experience in showing how difficult it is for the

general public, either as consumers, workers, or citizens, to control officialdom; partly the displacement of revolutionary ideas by evolutionary opportunism among the thinking leaders. But chiefly it is the growth, under the stimuli of trade unionism, guild socialism, and syndicalism, of a demand for new modes of industrial government in which the employed shall everywhere have a voice or even a control of the conditions of employment, and perhaps some property or vested interest in the business to which they contribute their labor.

All this movement as yet is vague and inchoate, but it is making experimental advances along various roads. Nor does it find a wholly unfavorable reception in capitalist and employing quarters. In England, the classic land of compromise, there is among large numbers of employers a growing disposition to make large concessions from the earlier absolutism. In an increasing number of trades the practice of collective bargaining is accompanied by the setting up of a machinery of common consultation between representatives of employers and employed upon matters of common interest. The Whitley Councils, providing for such common action in the several works, district and national industries, have been in effect a large extension of practices long established in many of the textile, metal, and other organized trades. They stand not merely for settlement of wages, hours, and other "disputes," but for concerted active policies in the improvement of trade methods. True, they constitute as yet no formal curtailment of the financial or administrative control by the employer, but as these managerial functions clearly influence conditions of employment, the earlier limitations of Whitleyism must evidently yield to a fuller measure of coöperation. If, as is evidenced in a few more liberal businesses, workers' representatives, as directors or otherwise, are admitted into the inner managerial circle, it seems evident that we are heading along a road far removed from socialism.

One further capitalist concession advocated by a few liberal employers deserves attention, being more radical than any of the others. Why not withdraw the sting or stigma of "profiteering" from a business by putting its capital upon a minimum subsistence basis, already done so far as debenture capital is concerned? Or else, a judicious compromise upon the extreme proposal, why not fix minimum rates of interest on capital and minimum rates of wages for labor, and then by common consent of the two parties distribute any surplus in an agreed proportion between capitalist and worker?

The prime indispensable condition for such experiments in pacific coöperation between capital and labor is the strong organization of both parties, trades unions and big business working together in amity for a common cause. But what cause? The public? The least reflection serves to show that separate trade combinations of capital and labor can of themselves furnish no solution of the graver economic problems, and might even open up new modes of social conflict. An era of private combination may be as costly, wasteful, and dangerous to the public as the era of private competition it displaces. The capital and labor in well organized industries controlling the prime necessaries of life or trade, such key industries as railroads, mining, power, iron and steel, banking, are evidently in a position to extract preferential terms for their capital and labor from other industries and the consuming public. Already there are clear indications in Britain of a disposition on the part of capital and labor in strong sheltered trades to secure for themselves gainful conditions, partly at the expense of other trades exposed to competition in the world market, and partly at the expense of the consumer.

The loose notion that capital and labor can get together for the settlement of their disputes and for operation of the industry in their common interest without danger to other trades and the consuming public is a puerile optimism. Either combined capital, or combined labor, still more a joint combine, in mines or electric power could evidently blackmail the nation in fixing rates and prices and limiting supplies. They need not do so in the blatant manner of the highwayman. But they would be in a position to decide what reasonable rates, reasonable profits, reasonable wages were and to impose them. The necessity of some common arrangements among the diverse industries to obviate their policy of separate pulls and to give security to the consumer led the British Government to summon a National Industrial Council in 1919, in order to devise a policy of industrial peace and progress. When the tension of the post-war situation slackened this project lapsed. But no intelligent politicians or business men in Britain believe, whatever their desire, that the state can leave the public unprotected to the mercy or generosity of strong combines of capital or labor or both.

Every one is agreed that if the ownership and operation of mines, railroads, and power be left in private hands, drastic control by the state will be required. In these and other virtual monopolies the policy of state control moves in four directions:

1. Satisfactory conditions of employment as regards wages, hours, provisions against unemployment, etc.
2. Regulation of prices and rates in the interest of users and consumers.
3. Limitations of profits by taxation of the surplus.
4. Standardized publicity of accounts to secure an informed public opinion.

Socialism in Britain is just now halting at this stage. But the unpopularity of state interference and officialism cannot stay the tide. If adequate protection for the general public can be got by state control along these lines, public ownership and operation may be averted. It is just here that the new liberalism of Britain separates itself from the socialism of labor. Liberals believe in the efficiency of this publicity and limited control by the state, though they do not formally disclaim all public ownership. Their position is stated in the following resolution adopted by the National Liberal Federation in 1921 and 1923.

"That the nationalization of all the means of production, distribution, and exchange is inadvisable as tending to destroy freedom, check initiative, and impoverish the people; but that certain industries and services may be advantageously nationalized or municipalized, each case being considered on its merits."

This really means that only in case publicity and control fail to secure the people against the extortionate conduct of private profit-seeking corporations will public ownership be favored. Even among conservatives no sentimental or theoretic objections against socialism would preclude support for the nationalization of mines and railroads if control proved ineffective and fair terms of public purchase were offered.

How far the American movement corresponds with the British in general outline I will not pretend to judge. Distrust of the state is far more widespread and deep-rooted in America. Autocracy in political or industrial government seems more easily accepted or less resented. The idea that the big-business man, who is "doing things" in railroading, finance, or manufacture, should submit to serious interference, on the ground that he is arbitrarily ruling the lives of thousands of workers or citizens, or is making too much money, seems to have little purchase on the public mind. There is, I think, a marked difference between public opinion in America and Britain which may be illustrated by an example. In England there is a genuine and wide acceptance of the doctrine that undeveloped natural resources should "belong to" the public, and that, even if private enterprise participates in their development, their value should accrue to the public. As regards mineral rights, industrial power, future site, and other land values, not only labor men and liberals but many conservatives would assent to this public policy. This involves not merely control but ownership, i.e., the conservation to the people of specific property rights. How far is this doctrine accepted in America?

Not only does socialism in the limited British sense of nationalized railroads, mines, etc., seem ruled out as a practicable policy, but the reality both of conservation and control appears to have no recognition in the ruling class. Let me cite Mr. Hoover as a capable, fair-minded exponent of this plank of good Americanism. First we are told that "we are passing from a period of extreme individualistic action into a period of associated activities," i.e., competition gives way to combination. Then we learn, "It is the business of government to regulate and control, not to manage or operate." The best case is power, the prime source of modern industrial life. Power is a natural product and as such might be conceived as "belonging to" the community. Moreover, as Mr. Hoover says, "Power development is a public utility. Its purpose is social service." What, then, would Mr. Hoover do with this "public utility"? Hand it over to private companies whose "purpose" is profit, not "social service," leave them free to operate it, without imposing "unnecessary restrictions on power development" or the hampering policy of "a general survey of power resources" or "imposition of excessive taxation." Not only is the state to keep off its interfering hands; it is to bestow upon these private companies its public powers. "Public utility companies are agents of the state and as such should have, under proper safeguards and on the certificate of 'appropriate authorities,' the right to acquire power sites and transmission rights of way in the same manner as the state itself—by the exercise of the 'power of eminent domain.'" Are intelligent Americans satisfied with the ability of this doctrine of agency, its "safeguards" and "appropriate authorities," to protect the American people against the intrusion of other purposes than "social service" into the operation of this key industry, endowed thus gratuitously with the free run of national and legal monopoly? I know what is at the back of Mr. Hoover's mind. It is the curious psychological mixture that seizes all business men in the face of big profitable opportunities. It runs into these shapes of thought and feeling: (1) We can do it better than any public body, and the less the public interferes the better we can do it. (2) We shall make big money, but this is a necessary stimulus to high initiative and energy. (3) We shall give the public good and cheap service, for the conditions of large, profitable output will compel and enable us to charge low rates.

The first two propositions are genuine beliefs, the last is a false "rationalization," which every trained economist can at once detect, though it lies ineradicable in the business mind.

I would end this tentative inquiry with a question on the nature of the government control and regulation, proposed as the limits of state intervention in industry. Can control be made effective without so much inquisition into costings, so much legal and enforced regulation of labor conditions and of prices, so much publicity and detail of accounts, as seriously to interfere with the free management of the business? Those who rule out on principle all public ownership and operation of the national resources of materials and power, and hand them over to private companies, are under an obligation to put some clearer meaning into the terms "control" and "regulation" upon which they rely for securing the interests of the people against abuses of the monopoly powers which their policy must generate.

In Britain a slow but steady and insistent movement is making for public ownership of these industries, combined with a machinery of operation in which the knowledge and interests of the business staffs, technicians, and manual workers shall be duly represented, though the state, in which the property is vested, shall have a final voice in decisions.[7]

Few people realize either the potential wealth or the primitive development of the area under the Soviet organization. Russia lies between the undeveloped East and the industrialized West. She has turned her back to the East and is attempting large-scale industrialization as it is known in the West—but, of course, socialized — with resources of raw materials, oils, minerals, timber, agricultural products which give great promise for the future. But beyond this it is hoped to bring vast territories of Asia into the Soviet system; as a first step trade is carefully fostered. Here is kerosene being carried on camel-back from Baku to Afghanistan. (Courtesy Amtorg Trading Corporation.)

3. *Russian Experience with Socialism*

Those who call themselves Socialists have always been reduced to talking in general and ideal terms when a question arose as to whether the socialistic order of affairs would work well in practice. For there never had, until recently, been any extensive trial of the system as a whole. But Russia is trying it; and her worst enemies are being forced to admit that the system appears to be able to produce goods in greater quantities than the old one and to spread such prosperity as there is over wider areas of the population.[8]

The industries of Russia, except agriculture, have been almost wholly nationalized, the state has taken over the ownership of the land, and all commercial services such as marketing, transporting and financing, are

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[7] Quoted by permission of the author and the editors from *The Nation*, cxx, 408–410 (April 15, 1925).

[8] For a history of Russian economic experience since the Revolution of 1917 see Maurice Dobb, *The Economic Development of Russia since the Revolution*, 1928 and *Soviet Russia in the Second Decade* (Chase, Dunn and Tugwell, editors), 1928.

SOVIET UNION BUDGET FOR 1928–29

REVENUE

	1928–29 Estimated	1928–29 Actual
	(in thousand rubles)	
I. Direct taxation—		
(1) Single agricultural tax	400,000	442,912
(2) Turnover tax	1,005,000	1,047,212
(3) Income tax	272,000	284,590
(4) Excess profits tax	22,060	19,387
(5) Inheritance and gift tax	1,277	1,821
Total direct taxes	1,700,287	1,795,922
II. Indirect taxation—		
(1) Excise taxes	1,735,500	1,800,631
(2) Customs duties	255,000	254,598
Total indirect taxation	1,990,500	2,055,229
III. Stamp duties and other dues	146,236	144,244
Total Revenue from Taxation	3,837,023	3,995,395
IV. State property and enterprises—		
(1) Industry	275,006	255,266
(2) Commerce	32,009	32,241
(3) Banks	103,000	108,470
(4) Forests	283,349	306,450
(5) Mines	65,203	65,608
(6) Other state property and enterprises	24,475	35,810
(7) Concessions	4,507	5,095
Total Revenue from State Property and Enterprises	787,549	808,940
V. Loans repaid and interest	41,469	37,627
VI. Miscellaneous revenue	87,640	110,617
VII. State loans	800,000	693,900
VIII. Surplus from previous years	115,000	113,064
IX. Commissariat for Transportation	1,904,409	2,079,244
X. Commissariat for Posts and Telegraphs	190,000	198,102
Grand Total	7,763,140	8,036,889

EXPENDITURE

	1928–29 Estimated	1928–29 Actual
	(in thousand rubles)	
I. Federal government departments—		
(1) Government departments and institutions	225,240	225,557
(2) Army and navy	850,742	853,272
(3) Military sanitary administration	23,833	23,747
Total federal government departments	1,099,815	1,102,576
II. Special funds—		
(1) Homeless children	9,500	8,548
(2) Publications	3,900	4,030
(3) Reserve fund of the Council of People's Commissars	110,500	127,459
(4) Printing of notes and mint	4,053	4,009
Total special funds	127,953	144,046
III. Service on loans	293,000	294,127
IV. Payments to constituent republics—including departments and institutions, construction, and road-building	864,288	891,237
V. Financing of national economy—		
(1) Industry	979,960	1,002,024
(2) Economic reconstruction loan payments	31,850	28,450
(3) Electrification	185,200	175,212
(4) Agriculture	386,203	300,191
(5) To Uzbekistan Republic for crop improvement	42,000	42,000
(6) Coöperatives	5,970	4,292
(7) Development of trade	181,800	247,048
(8) Municipal credits and housing	70,000	61,879
(9) Miscellaneous	38,300	39,164
Total financing of national economy	1,921,103	2,000,260
VI. Payments to local budgets	934,225	991,236
VII. Special reserve of U.S.S.R.	50,000	50,000
VIII. Miscellaneous expenditures	20,695	13,353
IX. Commissariat for Transportation	2,262,061	2,336,198
X. Commissariat for Posts and Telegraphs	190,000	198,102
Grand Total	7,763,150	8,021,135

This simplified representation of the Soviet Union budget for 1928–29 possesses many features of interest to observers from other countries. On both the revenue and expendieither performed by the state or by closely articulated agencies—such as the retail coöperatives. Through the ownership of the land and domination of the agencies to which farmers must sell and from which they must buy, the state also influences even agriculture in a very real sense.[9] This ownership or substantial control of every branch of economic life enables the Russians to plan and to carry out their industrial operations in accordance with a completely thought-out program. The Central Planning Board (Gosplan) exists solely for the purpose of thinking out and charting a desirable and possible course of future development. In accordance with this plan capital is allocated, resources made available, building operations authorized, wages paid, and other functions similarly coördinated. Industries are organized into state trusts which do not differ greatly in structure and functioning from some of our own larger businesses except that they each modify their plans to suit the whole, whereas ours are at least theoretically free to act without regard to others. At the head of the economic organization is a state board (The Council of Labor and Defense) and in charge of manufacturing industries in general there is a Supreme Economic Council. The profits of some industries are given to others for developmental purposes and prices are controlled in the general interest, rigorously and universally. It is a complete socialistic scheme.[10]

Mr. Stuart Chase describes it in *Soviet Russia in the Second Decade:*

> The gentlemen who run Russia do not travel on the flip-a-coin basis. They proceeded to get together a group of able economists, engineers and statisticians and ordered them—as President Wilson ordered the War Industries Board—to outline a program—a plan for next year, a plan for the next five years, a general policy for the next fifteen years. And so, in 1923, the State Planning Commission, popularly known as the *Gosplan*, came into being, taking over the functions of an earlier super-power board. It was paper work, inevitably abundant with theory and speculation, but at the same time it was an answer to a tangible, immediate crisis.

[9] Though the question of peasant- as against worker-domination in the Union is perhaps the most serious problem of the immediate future in Russia. The student is urged to follow current developments in the great attempt being made to collectivize farming; it is by success in this that the Soviets can best consolidate their power.

[10] These matters are examined more in detail in an article called "Experimental Control in Russian Industry" by R. G. Tugwell in the *Political Science Quarterly* for June, 1928.

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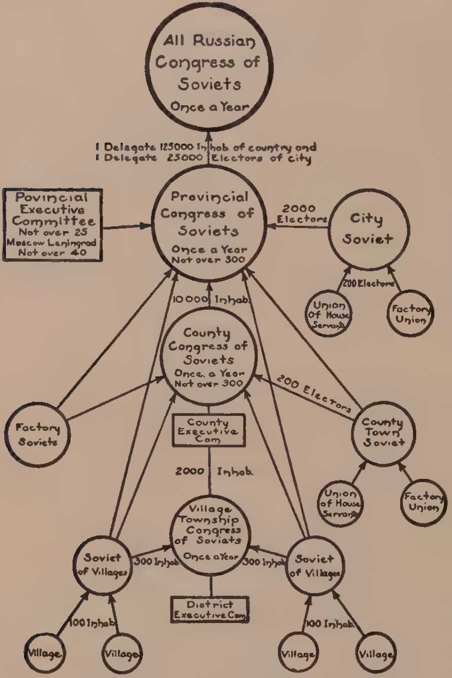
ture sides there are a whole series of entries which would not be found in the budget of a "capitalist" nation. Besides taxes, there are heavy receipts from state-owned industries; and besides expenditures for the usual government functions, there are items for "financing the national economy." The two columns make it possible to compare the results expected from the "five-year plan" with those which were attained. It may be noted that expenditures for industry in this budget were 50 per cent greater than for 1927–28. The Russians are concentrating efforts on two "fronts," as they call them—the collectivizing of agriculture and the building up of the heavy industries. Heavy investments in these long-run projects entail immediate sacrifices—for instance, shoe or textile factories might be built instead of hydroelectric projects or steel mills—but in the interest of future prosperity, they are being undertaken, neverthless, on a grand scale. It will be interesting to watch for the publication of results in future budgets. (From *Economic Review of the Soviet Union*, January 15, 1930, p. 33.)

There are at present over 500 persons on the central staff of the Gosplan in Moscow, headed by a governing board of sixteen, who are appointed by the Council of People's Commissars. In addition there are a number of consulting experts on a part-time arrangement. The staff is divided into a Reconstruction Division, a Production Division, and an Economic Division. A monthly statistical review is published, much of the data for which is kept up to date by information wired from the outlying local districts. The Gosplan has legal authority to demand documents and figures from any outside source. It does not do much collecting of original data itself.

To coördinate its activities, local planning boards—little Gosplans—have been set up all over the country. The Ural section has a fine building to itself and a staff of over 200. Each constituent republic has such a board, each major district, each smaller provincial area. Every agricultural center, every factory, prepares reports that ultimately come into the Gosplan calculations. The reports are made on printed forms and carry a wealth of detailed information—quite possibly more than is actually needed. As a result every industrial unit knows where it functions, what it is expected to produce, what niche it fills in the whole national economy. I found no factory manager, no director of even the smallest agricul-



The political organization of the Russian Federation of Republics is diagrammed here. Each village of over three hundred inhabitants elects its local soviet on the basis of one deputy to one hundred inhabitants. The deputies in turn select an executive committee which runs the local government. The delegates from the various village soviets are sent once a year to the township, or volost, congresses on the basis of one delegate to three hundred inhabitants. Delegates from the volost are sent to the county, or uyezed, congress on the basis of one deputy to one thousand inhabitants, and to the province, or gubernia, congress on the basis of one delegate to ten thousand inhabitants. To this latter congress are also sent representatives from the cities on the basis of one deputy to two thousand electors. All of these congresses meet once a year, unless called in special session. Each elects a permanent central executive committee which holds office until the next congress. Each city has its soviet, elected from the various workers, both of hand and brain, within the municipality. The gubernia soviets send delegates to the annual congress of their respective republics as well as to the All-Union Congress of Soviets. In the All-Union Congress of Soviets, all the various republics within the union are represented. The Congress is the supreme authority, having both legislative and administrative functions. When the Congress is not in session, this authority devolves upon the Union Central Executive Committee. (From *Soviet Russia in the Second Decade*, edited by Chase, Dunn and Tugwell, 1927.)

tural station, who did not know all about the Gosplan; who did not feel its hand on his day-by-day work.

You may decide to go to Russia, but you cannot get in without a visa on your passport. Similarly no major step in industry, agriculture, transportation, superpower or finance can be taken without the visa of the Gosplan. It is the clearing house for the whole economic structure. Yet legally it is an advisory body only; one arm of the Council of Labor and Defense. It can promulgate no legislation, issue no "cease and desist" orders. Its power comes from the fact that the supreme administrative body of the republic—the Council of People's Commissars—will not act on economic matters until it has secured the approval of the Gosplan. Its real power—as opposed to its legal power—is accordingly very great. It charts the course upon which the ship of state is steered.

It would be a mistake to suppose, however, that the Gosplan is the only agent for economic coördination and forward planning. Rather it is the court of last resort. The Supreme Economic Council which directs the trusts and operates industry, has a whole series of planning boards connected with its administrative branches. These boards work out operating schedules for the future, propose the allocation of new capital, industry by industry, make detailed proposals of what they think should be done. When such proposals are finally threshed out, then they go to the Gosplan for acceptance or revision. The Gosplan has itself been following the industry closely, it has on the table, furthermore, the current proposals for agricultural development, the proposals for transportation, for superpower, for exports; finally, it has its own one-year and five programs as a bench mark—and, as a resultant of all these forces, it is the only body in the state which can intelligently accept or revise the proposals of the planning boards of the Supreme Economic Council, or of the railroads, or of any other operating group. It alone can fit the jig-saw puzzle together.

The objectives of the Gosplan have been two. First to bring Russian economic output up to the pre-war basis of productivity. Second, to make Russia economically self-supporting—so far as is reasonably possible. These two objectives, furthermore, were not in complete harmony, because self-sufficiency meant a greater relative expenditure on capital goods than on goods for immediate consumption, and thus delayed the attainment of the pre-war output of consumable commodities.

Despite this handicap, as we shall see in the next section, the pre-war level for all industry combined has been reached and passed, with specific industries still below and others far above the 1913 standard. Therefore, the first objective of the Gosplan, broadly speaking, has been attained, though much remains to be done in pulling up the lagging minority.[11]

The available evidence as to the success of the scheme seems to indicate clearly enough that it works. There are those who do not like it and there are those who suffer under it, but, judged as an economic mechanism, it shows an amazing power to produce and distribute goods. This, of course, rather by comparison with former Russian than with present American standards. Judged by our own success Russian industry is in every way backward. But it is going ahead rapidly, and many observers incline to the opinion that the major advantages—coördination, planning, capital and price controls, effective use of resources, conservation of human and natural energies—outweigh the disadvantages—the supposed loss of incentive, red tape, unimaginative centralized authority.

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[11] *Soviet Russia in the Second Decade*, pp. 28–32.

It is certain that any student of contemporary economic conditions can gain much from close study of the Soviet system, and especially Americans whose problems are in many ways similar—though at present on a different level—to those of Russian folk. He who examines this object-lesson will discover many features in the social system to which Western democrats take violent exception. There is a ruthlessness, a disregard for liberties and rights, which the most ardent well-wishers of socialism and of the Russian people find profoundly distasteful. They are left with an uneasy question in their minds. Is all this repression, spying, and violence a product of socialism? Or is it merely an inheritance of the Russian people from a reign of worse individual miseries under the old autocracy? It is still too soon to say. Theoretical believers are apt to reason in the latter way. Russia, they say, has had none of our long training in democratic discipline. The individual will come into freedom as the new education finds its results in a new generation and as the curve of prosperity rises. If this is not true, the conclusion is inevitable that vast human sufferings have been undergone for nothing.

The question is often asked: "What will happen when the revolutionary generation of Russia is gone?" In "capitalistic countries the profit motive is largely depended on; in Russia enthusiasm for a workers' republic is depended on. Will the younger generation find itself actuated by the same impulses which have served to carry Russia through the revolution and the difficult reconstruction years? To meet this problem the schools devote themselves to propaganda and youth organizations of several kinds attempt to build up and continually to renew the revolutionary spirit. To work, each for all, and to work hard is a part of the religion of communism. (Courtesy Amtorg Trading Corporation.)

It must be understood that what can be said of Soviet Russia in the way of praise has serious reservations of this sort. But questions of another sort must be raised: will experiment rather than dogma control the management of Soviet institutions in the future? There is no reasonable question that production now runs at a higher level than before the war. This is really remarkable considering the almost total economic debacle of 1920–23. The war itself very nearly ruined industry under the mismanagement of the Czarist government. This was followed by the inevitable disasters attendant upon the change in social control and of individual status during the revolution. But worst of all, perhaps, were the Civil wars when the land was devastated by internal strife, and the period of military communism when inexperienced idealists attempted to clamp down upon Russia the rigid molds of a literary system. Beginning in 1923–24 the modification of extreme dogma was undertaken by leaders who had discovered, at immense cost to the masses, the intractability of economic forces. The New Economic Policy undertaken by Lenin, as Lenin had undertaken Communism, was a recognition that experience is a better guide than textbooks. There is reason for believing that experimentalism has made real headway. All the classic dangers of a socialistic régime, foreseen with fear by generations of Marxian critics, have been undergone. The problems of bureaucracy, personal aggrandizement, graft, inefficiency, have arisen. Not all of them have been finally overcome; but they have been faced and attempts have been made at solution. Our traditional beliefs and antagonisms are so mixed into our attitudes toward the Russians of the Soviet régime that we are in danger of overlooking the value of the experiment for us. We must make a sharp distinction between those matters which are Russian and those which are socialistic. It is not always possible to do this; perhaps it is seldom possible to do it altogether; but it is necessary to go as far as we can. No one who admires the Gosplan or the coördination of finance and industry, achieved through the Council of National Defense, or the organization of the distributive services through central agencies, wishes to imply necessarily that he approves the summary treatment still accorded political prisoners or the fear in which intellectual dissenters must go lest they and their dependents suffer. Nor is it likely that these features could be fitted into any socialism a western nation might adopt. Surely, however, any student of economic affairs might with great profit attempt to understand and follow the development of such an experiment as the Gosplan. It must be set down as the

The vast collectivization program for Russian agriculture is well under way. It finds its best chance on the wide plains of the South—the Steppes—on these gigantic state farms an attempt is being made to develop the efficiencies of large-scale effort which have been so successful in industry. On this vast-stretching farm, seed is being selected and cleaned preparatory to sowing land which has been fitted with the help of American motorized farm machines. (Courtesy Amtorg Trading Corporation.)

most serious attempt at self-knowledge and future planning men have ever attempted.[12] Russia is an experiment, which if we try to understand, will teach us much in the years ahead.

Soviet Russia, looked at as an economic experiment, may possibly do more than teach us something. She may force us, and other "capitalistic" nations to make very definite concessions to the ideas of which she is the champion. This pressure may arise in strictly economic ways. Suppose, for instance, her system of production should prove, as it is believed in Russia that it will, far more efficient than the free-enterprise of Western Europe and America. There are theoretical reasons, at least, why it might. For a planned and centrally managed system avoids the duplications of effort, the wastes of material, and the enervating conflicts which are imposed by the very nature of our institutions. And if, added to the lower expenses of producing and distributing goods which may result from this, she should maintain the thorough discipline of a communism which now has many of the features of a religious faith, and so secure energy and initiative without our costly uses of profits, her position might well become one of definite economic supremacy.

It must always be remembered that Russia possesses the largest territory in the world which is free from all trade barriers, and that within this wide area there are the greatest unused reserves of raw materials of which we know. This is a potential source of immense strength. And if she should, at some future time, choose to use it, together with her powers of self-discipline, to carry on trade wars with such countries as England, Germany, and France, who have become greatly dependent on their positions as workshops and exporters, there would perhaps be no stopping place short of ruin for these other nations—and sooner or later we should be drawn into the struggle too just as we were involved in the Great War.

It is too early yet to predict such a success for the Russian system but not too soon to begin to look for signs. One of these is certainly the impressive way in which immediate standards of living have been sacrificed to the long-run program. In the past few years resources might have been used to strengthen the finishing and distributive industries; instead there has been a deliberate neglect of these in favor of building up basic heavy manufactures; hydroelectric, steel and other metal plants, mines and oil wells, railway extensions, machine-tool factories, and the like. Another is the fact that Russia is beginning already to enter the markets of the world as an exporter of manufactured goods. Hitherto she has been ranked as "backward": a source of raw materials and a market for finished goods. These, and others, are slight signs, perhaps, but they are already causing shudders of fear in the capitals of western nations, and Mr. Walter Duranty, the distinguished American journalist, resident in Moscow, has begun to write of Russia as a world factor, a threatening one, which may shake the very foundation of our institutions.[13]

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[12] The best present source is *The Soviet Union Looks Ahead: The Five Years Plan for Economic Construction.* Liveright, 1929.

Of all the possible causes of future international war, none can compare with this impending struggle between two forms of economic organization, two ideas of social organization, two ways of viewing the world. It may be that before war comes, we, for instance, may choose to modify our institutions in the direction of better planning, closer control, greater efficiency; or it may be that the disaffected masses (especially in Germany or France) may bring about a series of national revolutions and ally themselves with the Federation of Soviet Republics. These things might happen. It might even come about that Russia, with other revolutionized nations (say Germany, for instance) might, at some future time be able to split the whole world into two opposing camps: communist and capitalist. And the United States, and whatever may be left, by that time, of the British Empire, may be arranged in a new world war against the revolutionary states. Nothing can prevent this, if Russia is economically successful, except a series of compromises and a slow rapprochement in ideas and institutions. If such a struggle should arise, it is important to remember that there will develop a sharp contrast of ideals. Given something like an equality of economic strength, that system will prevail, if a struggle should come, whose appeal to the masses of men will be the stronger. Morale is an important factor in war. In such a case, with the communists pleading that theirs is a struggle

The finishing industries in Russia have been deliberately sacrificed to the construction of heavy, basic materials. This picture shows one operation in the assembly of a 10,000 kilowatt turbine at the Leningrad metal works. This department of the plant was completed in 1929 and will produce 100 such turbines a year. (Courtesy Amtorg Trading Corporation.)

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[13] Cf. his almost daily dispatches to the *Times*, and especially that of Sunday, February 16, 1930.

for humanity and that ours is for the protection of exploiting classes, we shall have, if meantime we have made no great progress toward such improvements as have been suggested in this book, a great burden of justification to carry. It may be that by that time men will offer greater resistance than they have in the past to being led blindly into war. The wide and loose use, even in peacetime, of the meretricious arts of propaganda has already engendered a wide suspicion of democratic leadership, and a tendency to test fine words by actual performance. Our cause will need to be juster, than would have been necessary at any time before, to prevail. But if those changes come which will make our cause a more defensible one, we shall not only have the strength of justice, but shall perhaps have moved so far toward those ideals which communist believers also share, that no resort to force may be necessary.

Many social problems are involved in the attempt to collectivize farming in Russia. Old settled ways of living are being rudely disturbed; only the strictest social discipline can bring success. This is a traveling post office on the State farm "Giant." (Courtesy Amtorg Trading Corporation.)

This last is the hope of the world for peace; liberals everywhere are even now working to bring it about. Understanding is the first, the indispensable, preliminary step. So that every student who is also interested in peace, prosperity, and progress must, in the coming years, devote much study and thought to Russia and the Russians.

PART II

CONCLUSION

CHAPTER 45

TOWARD AN EXPERIMENTAL ECONOMICS

1. *Our Philosophy of Despair*

Perhaps the clearest conclusion one comes to after surveying the American economic situation is that life holds thrilling potentialities for the youth of our time. The problems we face are not desperate ones. They call for difficult efforts of thought and for sustained labor. But they nowhere seem to face utter frustration. We are not forced to consider how we may escape from starvation nor even from the privations of a destitution even less severe. The final extinction of our race and its culture through the failure of nature's goods seem utterly unthinkable in any likely future. Our problems are of a different sort, less negative than this, more constructive. We have to raise levels of living that are already the highest ever attained in man's long history, that are far higher even than those of the present time in any other place or among any other peoples.

It is time we came to a realization, however, of the need for this. We have tried to show, in some of the earlier chapters, that, by any ideal standard, we still have a problem of poverty. So if we calculate quite coldly the amount of food, the kind of houses, the quality of clothing, the variety of amusements, the provisions for health and well-being that would create a civilization lived completely upon the comfort level or above; and if then we calculate the money incomes of the masses of Americans, we see how great a discrepancy there is between what we have and what we should like to have. We frankly want and look forward to a life of a different sort from the one that is at present available to most people. The sort of blighting misery that is a common feature of life in many European cities [1] we do not have—or very little of it. Descriptions of that life happily sound unfamiliar to our ear.

No! The problems we have are essentially those of making a life, already the best man has ever had, even better. Measured by the facts of life elsewhere, it is good. Measured by the possibilities of the future, it is less than we may expect. And the task of youth is to create from this expectation the reality of achievement. It has been in the desire to set the eyes of men upon this goal and to point out some of the roads to the future that this book has been written. The youth of the future will not have to struggle against an ever-impending doom. His work will be carried out upon a higher

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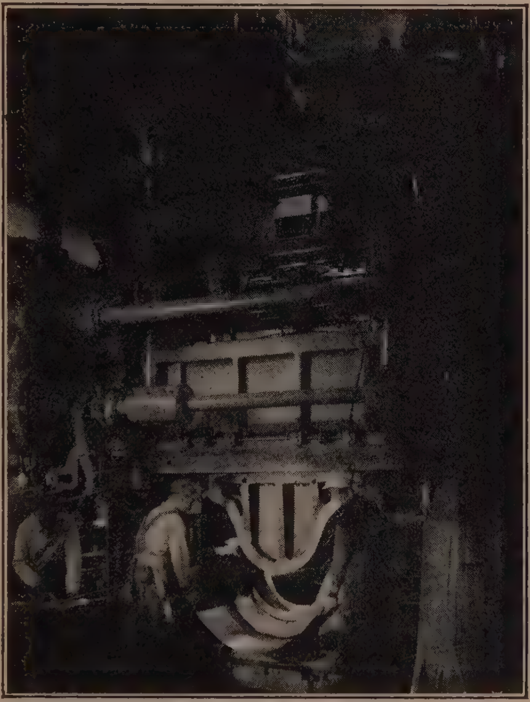
[1] Cf. William Bolitho's description of conditions in the Glasgow factory districts in his *Cancer of Empire*, 1925.

The mastery of machinery is the great task of the coming generation. But the meaning of "machinery" is not confined to such physical units as lathes, cranes, molds, and motors, formidable as these may appear, it widens into the social mechanisms we have devised, sometimes so irresponsibly, to perform the needful tasks of an industrialized society. In this latter field training and work are also required. (A Margaret Bourke-White Photo.)

level—on which fear will not *drive* with its lashing whips, but on which fortune will rather *beckon* to new efforts of creation. So new and higher motives will come into play. Many generations may possibly intervene before the constructive qualities in mankind can be fully released for the pushing forward of civilization and before the old qualities of suspicion, fear, and hatred can be smothered in the rush of creation, but the time has assuredly come when we may look forward to it with some confidence.



Servant or Master? (Courtesy of Olds Motor Company.)

The fact is that we have both prosperity and poverty, both surplus and deficit; and we are not able to choose between them. We have classes who live in no fear of want, who are assured that a good livelihood will result from their economic efforts, who live secure from the wolf that waits by the doors of the poor; but those poor, as Christ saw so long ago, we have with us still. They live in constant fear that, in spite of their best efforts, somehow calamity will descend upon them. A period of mysterious business depression that closes mills and factories, the introduction of some new machine or process, a change in the wants of people, old age, accident—all have a frightful power over their lives and the lives of those for whom they feel a responsibility.

So much, the most casual observation makes plain. There is a constant shifting of the proportions of those who live in each of these sharply contrasted conditions. At one time many, at another time fewer, live in the free air of prosperity. There are many even of the prosperous who have known poverty; and those who have felt the ghostly touch of its fear never really forget the shudder that then shook them. They are quite incapable of freedom. They look at existence through eyes that are darkened by that single old experience: it seems to them simply that life is a double struggle—

man against nature, and man against man. All their attitudes and all their reflections are dominated by this conception of a hunger that lies in wait. It becomes an enemy of popular prophecy, of social expectation. The fact that we live in an age of economic surplus when prosperity—not for a few, not for any group of any class, but for all—hovers imminently on the edge of our civilization, is quite hidden. We have eyes but we cannot see, being withheld from vision by the old fog of poverty philosophy that hangs over our world.[2]

Our national income has risen to some ninety billions a year. Mr. David Friday said boldly in 1923, "We are within striking distance of an economic order where the means of well-being shall be established for all." [3] This statement he has reiterated many times, without contradiction. And these are no new generalizations. Simon N. Patten knew all this to its furthest implications and preached his philosophy of prosperity for forty years.[4] But there were few to listen, and our heritage of dismal thought that "grew up beside the meager turnip fields of England" continued its influence unabated.

One wonders why men are so afraid of good fortune, of favorable facts—for they are facts. One would suppose that such news for humanity would be seized upon and carried in the streets on joyful banners; and that the intelligence of humanity would see at once that its first business is the organization of ways of utilizing surplus for happiness. After all, it is a simple business to do what has to be done first in the economic world to make people happy; but nothing of the sort has happened when again and again attention has been called to our potentialities of prosperity. Herbert Spencer, Karl Marx, even Henry George, enjoy a greater vogue in America—the America of three and a half billion bushel corn crops—than does Patten who, unlike those others, came straight out of the fecund mid-century soil of Illinois.

We are like a chosen people on a dividing ridge between the desert, through which we have just come with pain and struggle, and the promised land, in the hope of which we have been sustained in the terrible journey. We stand facing the desert, thinking desert thoughts, forming desert words, when all the time at our backs, in plain sight and even seen occasionally over our shoulders, there lies the land of milk and honey. We progress backward, crab-fashion, down the easy slope, mumbling about sand and dryness, the need of provision for desert life, the dangers of travel, and the sins and sorrows of a homeless folk, when we might run like children, shouting joyfully, down into grassy, well watered valleys, privations forgot, hearts full of an opulent tomorrow.

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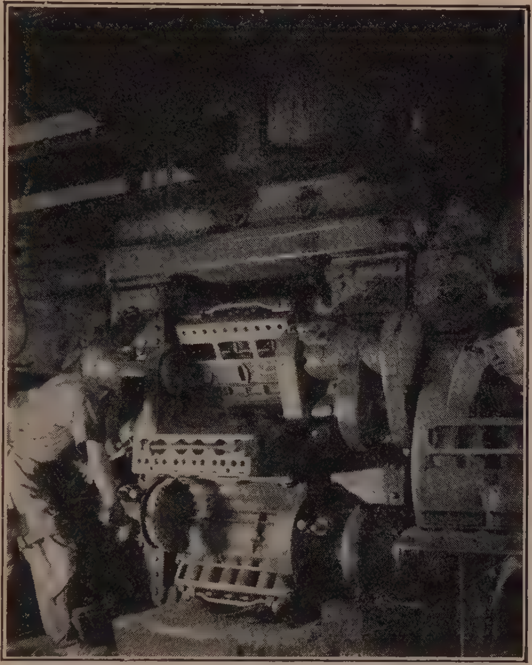
[2] Cf. "Our Philosophy of Despair," by R. G. Tugwell, *The University Journal of Business*, ii, 428 (Sept., 1924).

[3] *The New Republic*, xxxiii, 273. Cf. also his *Profits, Wages, and Prices*, Ch. XIV, "How Can Real Wages be Raised?"

[4] See, for instance, his *Theory of Prosperity*, his *New Basis of Civilization*, and his "Reconstruction of Economic Theory," in *Essays in Economic Theory* (Knopf, 1924).

It is no accident but the same old incorrigible despair, that causes our prophets, our artists, our thinkers either to turn their eyes backward to the medieval side of European life, relics of which still exist, or to select the worst in American life as typical of the whole. This passes readily under the convenient name of realism, whereas, in fact, it represents only a distorted verisimilitude of our life. We expect the Socialists who have their theoretical roots in nineteenth century Europe to present misery as the typical aspect of twentieth century America. We are not surprised when we find that economics has not entirely recovered from the gray gloom of English fogs; but we may be pardoned a wonder when America herself breeds a generation of novelists and poets who have entirely overlooked the promises of a rich future beneath the surface uglinesses of our industrialism. In some sense it is selective. We want the thing we get from Sinclair Lewis; and so a host of other Lewises spring up. Lewis did not start a tradition—he merely confirmed it—but it is not the American tradition, as we shall some day find!


Modernized Work (Courtesy of Olds Motor Company.)

There is this much to be said for the Lewis school: they state the matter clearly and without confusion. They are all against what they are able to find in America. Not all of our thinkers are so clear. They know the promise but they are not willing to give themselves up to it and they waver between the notion of surplus and the notion of deficit. There is an excellent illustration of this in Scott Nearing's book *The Next Step*. He opens with these sentences.

> The knell of a dying order is tolling. Its keynote is despair. Gaunt hunger pulls at the rope, while dazed humanity listens, bewildered and afraid. . . . The war showed the impotence of the present order. . . . Yet the failure of the revolutionary forces to avail themselves of the opportunity presented by the war

proved the unreadiness of the masses to throw off the yoke of the old régime and to lay the foundations of the new order.

Notice that the keynote of Scott Nearing is also despair and that the foundations of the new order are not yet laid; yet, if one reads on, he discovers that Scott Nearing knows perfectly well that this isn't so. He presents a rational and, as it seems to us, particularly well ordered plan of march upon the promised land. Economic federalism seems to him to be the method of organizing the forces of progress that will lead us there. He says all that forcibly and persuasively, and comes (on page 163) to this really astonishing paragraph to a reader who has attended his opening words:

> In the past only the favored few had a chance to express their most holy aspirations. The development of modern industry, with its facility in the production of livelihood, promises a time, and that at no very great distance, when this opportunity may be common property, and men everywhere may be able to participate in that unending search after love, beauty, justice, truth—the highest of which humanity is capable.

There is a deep confusion here, the same confusion that torments so many thinkers of any and all complexions. It is most serious, of course, when it is found in social science. Nowhere is it so prevalent as in social theory, for economics has its background in the English classicists, sociology in Spencer, and politics in Locke and Montesquieu. It will not be resolved until we definitely turn our backs on the desert philosophers and gain a clearer view of the promised land, that green and fruitful place. Meanwhile we lack the vision or the resolution to choose from the elements of life the enduring ones, the ones that shall among them shape the future.

There can be no doubt that we live in a time when there is misery and suffering, but it is unnecessary to assume because of this that misery and suffering are the significant features of the future. Indeed, it is difficult to think otherwise than that much of the condition that we deplore continues to exist because we will not to enter into the kingdom. A nation that, in a single year, can add upwards of ten billions to its capital surplus and that chooses to ignore this fact in favor of gaunt hunger pulling at the rope of a funereal bell that tolls a knell of death, is in a pathological state, no less. Our social strength grows immeasurably, our evolution prepares the new order; how long shall we permit this disease complex to keep the forces of liberation supine and valueless?

2. *This Book and the Tasks of Youth*

In the hope that the eyes of youth may be turned toward this promised land—not forgetting the problem of poverty we face in the present, but not allowing it to dominate our thought, our shaping of institutions for the future—this book carries the subtitle to American Economic Life—*The Means of Its Improvement.* Most of our effort here has been spent in pointing out the elementary and obvious means of moving forward in economic life. So we considered the means of raising standards through bettering the technique of production, through a juster apportionment of income, through the rationalizing of the use of income and through the various suggestions that are prominently made for institutional reorganization.

Most progress of all, perhaps, has been made in bettering production technique. This is because the problems presented here are easiest of solution, calling, as they do, for the minute betterment of processes and for invention and reorganization within a going system rather than for a difficult working out of social relationships. Men's minds take hold of the problems of work upon material things more avidly than they attack the problems of the organization of social institutions and of revamping social relationships. And our more conspicuous failures in production, significantly enough, have occurred at the places where the larger considerations have intruded upon the working out of the technique of shaping material things. The "labor problem" is one of these failures. The problem discussed above under the heading of "making goods and making money," where it was pointed out that the very *system of business* involves the withholding of effort and the reduction of the output of goods, is another of them. We have got to the point, indeed, where further advance is conditioned upon *social* thinking rather than *mechanical* thinking. It is usual for economists to slight these disturbing features of economic life. But we could not have been steady in our purpose to point out to youth the means of improving life if we had done so here. The coming generations must somehow find the solutions their fathers have failed to find, and the sooner their eyes are set upon the key difficulties they must solve, the better, so we have felt.

Metropolis (A Margaret Bourke-White Photo.)

In discussing the apportionment of income we have also kept these considerations in mind. For here, in the past, we have proceeded haphazard and have evolved a system of apportionment that is as indefensible in its logic as it is disastrous in its consequences. We have pointed out that social policies, entered upon without any intelligent consideration of their ultimate results, have in fact so arranged matters that our enormous annual national incomes are badly apportioned; so badly apportioned, in fact, that eighty-six per cent of our people still live in poverty, while a very few command an immense aggregate control over income that permits them to indulge in such wastes and extravagances as were never known in the world before. We have asked young men and women to consider what social arrangements can be made for changing this situation and have pointed out the responsibilities of governments in the matter. It is difficult to retain any sanity of discussion in this field; it is one in which the emotions are easily engaged. But we have tried consistently to avoid emotionalism and to apply the test of consequences in order to see what program might be best for all people.

Our discussion of the uses of incomes was also relevant to the main purpose. We pleaded for wisdom and tried to make it clear that wisdom in this matter was to be attained by understanding how one chooses and in revising choices in the light of their consequences to the individual, to the various groups with which he is affiliated, and to the nation as a whole. It was our conclusion that a sort of symphonic masterpiece of the life of use might be worked out by each individual for himself which might become whatever kind of masterpiece his own capabilities would permit. We found ourselves rather against compulsions, and rather for social persuasion as against the indiscriminate persuasions now being so widely used. But we hoped, here again, for a new vision, in the youth of coming years, of the significance of genuinely creative living that should contribute to a better future.

We found ourselves, when it came to a consideration of proposals for comprehensive schemes of institutional reorganization, with considerable sympathy for the impulse which outlined them, but with reservations of doubt concerning the possibility of men's adopting any of them wholesale. And these doubts rather destroyed the need for discussing their details at any considerable length. What suggestions each of them possessed which might help in formulating programs for the future we tried to make clear. In coöperation alone, which depends upon the voluntary linking up of the individual with the groups through which he necessarily functions, and upon his merging of his own interests with those of his group, were we able to see a possible suggestion of future development. Coöperation might indeed be called *voluntary socialism*, for that is what it is. We spent some time in showing its development in various fields at home and abroad and, by implication, asked for it the consideration of the generation to which this book is addressed.

3. *The Experimental Attitude*

In all of this the authors have been concerned to further an experimental attitude toward the problems, to put the test of consequences first, to make it clear that a suggested solution is good only *if it works*. The materials of social science are peculiarly unamenable to the kind of experimenting which has contributed so greatly to the development of such natural sciences as physics and chemistry. But experiment is not impossible provided institutions and arrangements in industrial life can be completely conceived as instrumental. When we think of them as instrumental we are willing to think of their use as temporary, and of them as only imperfect agencies for attaining certain ends we have in mind. We realize that men imagined them as useful for some human purpose and that when human purposes have changed or the means of attaining the purposes have shifted, the instruments are no longer the best ones to use.

The difficulty in attaining this habit of mind toward the arrangements we make arises largely from our confusion of ends and means and from our susceptibility of emotional attachment to the temporary instruments of social life. If we have pleaded for reason in economic relationships here it has been because of a realization that these emotional attachments harden easily into irrevocable attitudes that prevent change and hamper progress. Perhaps as good an illustration of this as can be found is the unreasoning, almost hysterical, attachment of conservative Americans to their Constitution. An experimental attitude would prevent this. It would conceive of the Constitution as an instrument, would want it to be revised as changes made revision imperative, would see that refusal to revise it might result in a rising pressure of popular indignation that might explode with terrific force and disastrous social consequences. This is only one illustration of Americans' emotional attachments to institutions. Many of us are almost as fanatic in our attachment to private property, to capitalism, to the protective tariff, to individual bargaining between employers and employees, and to many other similar arrangements. It seems difficult to believe that an employers' association would have the effrontery to name a movement for the open shop "the American plan," but it did so. The attempt was obviously to capitalize the patriotic impulses of all of us in favor of a passing, antiquated system of employer-employee relationships that happened to be favorable to the immediate interests of employers. The experimental attitude is adequate protection against hysterical manifestations of this sort.

In order to be an experimentalist in economics it is not necessary to attempt to reduce actual industrial situations to laboratory simplicity for manipulation. This is the lesson we must learn. It is only necessary to consider all the arrangements we make as experiments, in a sense, and especially economic arrangements, which in our generation are passing through such a rapid evolution that a hardening of institutions around them is positively dangerous. The many manifestations of social unrest we see around us contain sufficient evidence that this is so. Flexibility, a continuing attitude of questioning, is the most difficult of all attitudes to maintain. We all are more comfortable if we can attach ourselves to certain institutions and identify ourselves with them, they protecting us and we protecting them. In a primitive, static society there was a survival value in this. In our own rapidly changing society the survival value has shifted. Society itself can survive only if it submits its arrangements to constant revision. To use a possibly absurd but illuminating illustration, suppose we all became deeply attached to the use of coal and to our system of arrangements for its mining and distribution—and then suppose all the coal were used up! We should be left high and dry with our foolish attachments waving in the air. It is scarcely less foolish for us to have such an attachment to the open shop, to absolute private property, or any other such institution.

It remains only to be said in conclusion of this book that the authors have meant always to maintain—indeed, also, to foster in their students and readers—this experimental attitude. They have never meant, at least, to be dogmatic; only tentatively helpful. They have never meant to discuss problems to the point of closing argument, only to open them more widely to reflective consideration. For conclusions concerning most of them would be premature. Our own deep interest in the quality of American life has been a fundamental motivation. Our general faith in its future and our specific respect for the intelligence of American youth determine our confidence, also, that the problems we face so uncertainly now will find far more certain answers in their minds. If only we have assisted in making clear some modern dilemmas and in enlisting the enthusiastic optimism of those to whom we must look for the eventual carrying on of our work, our book will have had all the success we could wish for it.

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